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CONSERVATIVE THERAPEUTICS *

THOMAS ORDWAY, M.D.
ALBANY, N. Y.

Notwithstanding the advance in medical science and the great improvement in medical education during the last twenty years, it is obvious that from the standpoint of the general public medical practice is not satisfactory. During the last few years, heated and conflicting criticisms of medical education by those in positions of authority have been factors in the formation of a commission on medical education to make a thorough survey of present requirements of medical practice. A not inconsiderable number of the people, including many otherwise intelligent persons, because of dissatisfaction with medical practice, go to the so-called cults, seeking relief from physical and mental difficulties.

In 1834, in a discourse on quackery, Dr. Zadok Howe pointed out the danger of the irregular practitioners whose energy at this time was devoted largely to the sale of "patent" vegetable remedies. He made interesting suggestions to check this evil, such as the diffusion of special education by the organization of lay societies, and opportunities for chemical examination of these remedies with reports of results. Such ideas carried out by the Council on Pharmacy and Chemistry, the publication *Hygeia* of the American Medical Association, and the work of the American Association for Medical Progress would seem to be carrying forward Dr. Howe's suggestions.

Even at this time, almost a hundred years later, the enormous advance in scientific medicine, with the remarkable development of surgical procedures and the discovery and application of methods of utmost importance in preventive medicine and public health, has led to neglect in medical teaching and practice of certain very valuable therapeutic aids. It has also created an intensive urge for the discovery of specifics and the premature announcement of amazing and false cures, by even the most prominent foreign and American university clinics.

Several years ago while I was in Europe making a survey of cancer research with particular reference to the application of radioactive substances, a study of official literature supplied from well known university clinics could with the greatest difficulty be differentiated from the advertisements of the most blatant quacks. In this country, also, a glance backward reveals the amazing and unwarranted publicity permitted even by university administrators announcing cures for various diseases, notably certain types of anemia, and infection, and particularly cancer. In some instances this has doubtless been due to the urge for funds that such publicity may supply, coupled with a feeling that the end justifies the means. In other instances, however, it is surprising how uncritical prominent educators and even learned chemists and physicists may be when dealing with biologic material; and when the added psychologic factor of the human being is introduced, the situation is even more confusing.

The American Medical Association sends the graduating class of medical students each year a code of personal ethics, "The Principles of Medical Ethics," a minimal standard which we believe necessary if medicine is to be regarded as a profession. Because of the far-reaching example and grave dangers of unwarranted claims and premature publicity just referred to, a code of ethics for our institutions would not seem out of place. How can we combat similar methods among the cults and irregular practitioners when such occurrences are only too common? In this connection I would commend the Lettsomian Lectures of Dr. E. F. Buzzard, recently published in the *Lancet*.

Conditions would be greatly helped if all practitioners and investigators established an ethical basis of procedure which required minimal criteria for diagnosis and treatment. Furthermore, in the treatment of every case we should constantly emphasize the dictum of Hippocrates that "the aim of the physician should be to do good to his patient, or, at least, to do no harm." If this is not true, what is the object of the practice of medicine? For if we regard our work as a profession, our purpose is not merely to strive for anatomic correction of defects, but to try to aid our patients in effective living.

Surgery will discover new methods, and pharmacology and immunology will assist in placing medicine on a more rational scientific basis; but there are to my mind two serious defects in our medical education and medical practice which have been potent factors in the development of the so-called cults—the neglect of the proper instruction and use of physical therapy, and the consideration and general application of psychiatry.

As physicians and investigators, we have not been foremost in acquiring the knowledge and in making suitable application of physical agents, but have left this for the most part to be developed by others. Indeed, in this subject, also, as is largely the case with drugs, vaccines and serums, the postgraduate education of practitioners has been taken over by uncritical commercial houses. Fortunately, a council on physical therapy has been formed during the past year by the

* Chairman's address, read before the Section on Pharmacology and Therapeutics at the Seventy-Seventh Annual Session of the American Medical Association, Dallas, Texas, April, 1926.

American Medical Association. The personnel of this council is a guarantee that we shall have the same conservative and critical judgment in matters relating to physical therapy that has been of such great value as a result of the work of the Council on Pharmacy and Chemistry.

Nervous and mental conditions as a cause of disability are so common and manifest themselves under such varied physical disguises as frequently to elude the practitioner without special psychiatric training and interest. Indeed, we might add that almost every case of disease has a mental as well as a physical aspect, just as every human being has a mind as well as a body.

This idea of the interrelation of the physical and mental is expressed in the dialogue of Plato. It may be described as "mens sana in corpore sano." Jowett notes that "the Greek ideal of beauty and goodness, the vision of the fair soul in the fair body, is realized in the beautiful Charmides, and that the true conception of medicine is as a science of the whole, as well as the parts, and of the mind as well as the body: which is playfully intimated in the story of the Thracean: 'I daresay that you may have heard eminent physicians say to a patient who comes to them with bad eyes that they cannot cure his eyes by themselves, but that if his eyes are to be cured, his head must be treated; and then again they say that to think of curing the head alone, and not the rest of the body also, is the height of folly, and arguing in this way they apply their methods to the whole body, and try to treat and heal the whole and the part together.'"

A lack of the practical knowledge of applied psychiatry has caused many to claim good results by the most diverse types of treatment in similar pathologic conditions. It would surprise many of the searchers for hypothetic, or microscopic, foci of infection, or the advocates of specific measures in certain types of arterial hypertension, to realize how many of those and other diverse complaints are relieved by encouragement and reassurance, and by rest, fresh air, suitable food, adequate elimination and reeducation. Howk has recently emphasized the value of the treatment of heart cases in sanatoriums intended for the care of the tuberculous. I would heartily indorse his views and would add that opportunity for such care might properly be extended to those suffering from various other chronic physical as well as nervous conditions. Reeducation, particularly relating to environmental and vocational readjustment, is of the greatest importance in medicine and is frequenely lost sight of in the heedless application of so-called specifics.

In considering the value of any therapeutic agent, it is obvious that we should have precise knowledge of the diagnosis and of the natural history of the difficulty; for proper diagnosis and therapeusis we should therefore set for ourselves minimal criteria. In an attempt to determine the value of certain physical agents, such as radium and the roentgen ray, I have already advocated and employed definite minimal criteria. Only in this way can we secure reliable data for critical analysis to determine the real therapeutic value of these agents. Those who have had extensive experience with cancer realize that the chief difficulty with educational programs which have been of such value in tuberculosis is the paucity of facts at our disposal. In the case of tuberculosis, knowing certain definite and essential facts about etiology and pathogenesis of the disease, even though no specific cure has been found, the incidence and mortality has been greatly reduced by suitable education, early diagnosis, and attention to the cardinal principles of treatment referred to above. The records of life insurance companies are a fertile source of facts regarding the course of certain diseases, and a careful following of their preferred risks should add many additional facts.

We need a detailed knowledge of the natural history of many disorders; and unless we have such definite information as a basis for comparison, it is very difficult to judge the value of various therapeutic procedures. Of the incidence and course of less definite diseases we know very little; but a system of disability reports, carefully checked up in industrial plants and in private practice, should give us "controls," which are so important in therapeutics. This is particularly emphasized in the case of the common colds, about the etiology and therapy of which there is so much doubt, in spite of the assertions of all sorts of specific cures. Such knowledge should be of great help in lessening the incidence and mortality of pneumonia. I have modified and simplified a report blank used by the United States Public Health Service so that it may serve for a simple system of reporting the incidence and course of general as well as special disabilities.

Clinical therapeutic research should be an intensive search for the truth, with adequate controls as indicated above, because of the variability of the factors dealt with. In this connection it would be well if all could read again that outstanding address on self limited diseases by Dr. Jacob Bigelow before the Massachusetts Medical Society, May 27, 1835. In his concluding remarks, Dr. Bigelow states that if at times we seem to "accomplish comparatively little in the actual direction of the disease, the necessity becomes more imperative that we should do that little wisely and well. The importance and usefulness of the medical profession, instead of being diminished, will always be elevated exactly in proportion as it understands itself, weighs justly its own powers, and professes simply what it can accomplish. It is no derogation from the importance of our art that we cannot always control the events of life and death, or even of health and sickness. The incompetence that we feel in this respect is shared by almost every man on whom the great responsibilities of society are devolved. The statesman cannot control the destinies of nations, nor the military commander the events of battles. The most eloquent pleader may fail to convince the judgment of his hearers, and the most skilful pilot may not be able to weather the storm. Yet it is not the less necessary that responsible men should study deeply and understandingly the science of their respective vocations. It is not the less important, for the sake of those whose safety is, and always will be, committed to their charge, that they should look with unbiased judgment on the necessary results of inevitable causes; and while an earnest and inquiring solicitude should always be kept alive in regard to the improvement of professional knowledge, it should never be forgotten that knowledge has for its only just and lasting foundation a rigid, impartial, and inflexible requisition of the truth."

Albany Medical College.

Centennial of Bromine.—The University of Montpellier is to celebrate in November the hundredth anniversary of the discovery of bromine by the professor of chemistry there, J. Balard.

BLOOD TRANSFUSION IN PERNICIOUS ANEMIA *

HAROLD W. JONES, M.D.
PHILADELPHIA

Blood transfusion in pernicious anemia produces better and more permanent results than any other therapeutic measure. Although transfusion has been used in this disease for many years, the early results were not satisfactory. The causes of these poor results were: (1) failure to cross agglutinate before each transfusion; (2) the use of improper methods of transfusion; (3) the injection of too large amounts of blood, and (4) too long an interval between transfusions. Many have said that transfusion did little good; others that it seemed to retard progress, and a few that it definitely shortened the life of the patient, all of which has served to bring discredit on this useful therapeutic measure.

TYPING AND CROSS AGGLUTINATION

The institution of typing by Shattuck, in 1899, gave added incentive to the use of transfusion by increasing its safety. However, the terms "universal donor" and "universal recipient" came into use. The belief that a so-called universal donor could safely give blood to any group and that a universal recipient could receive blood from any donor caused many hemolytic reactions. It was soon found that even though two persons were of the same type, it was possible that the serum of either might agglutinate the cells of the other. Cross agglutination was developed, and its use has distinctly lessened the number of serious* reactions. Changes in the patient's type may occur following a transfusion, and it is therefore safer to cross agglutinate before each transfusion, even though the same donor is used.

METHOD OF TRANSFUSION

The citrate method was instituted by Lewisohn to offset the disadvantages of Lindeman's method; that is, coagulation in the instrument. It should seldom be necessary to add a foreign body, such as sodium citrate, to the blood if a method is available that permits of the transfusion of blood without coagulation. The Unger method fulfils this requirement. Moreover, the injection of 2 per cent sodium citrate solution has resulted in death. Blood platelets are destroyed when the citrate method is used, and reactions are more common with citrated blood than with whole blood. Because of these facts, the transfusion of whole blood should be the method of choice.

Many patients with pernicious anemia have very small veins, but it should seldom be necessary to expose the vein in order to insert the needle. Frequently, there may be only one or two available veins; and, if these are exposed, incised or tied off, it prevents their easy use at an early interval for further transfusion.

AMOUNT OF BLOOD TRANSFUSED

It has been the custom in the past, and still is in some clinics, to administer large amounts of blood at a single transfusion; that is, from 800 to 1,200 cc. This amount in a disease in which the total blood volume is not reduced places a strain on the circulation. The myocardium in pernicious anemia has degenerated and therefore the injection of such large amounts of blood is attended with danger. It has also been suggested that the injection of large amounts of blood may depress regenerative function.

Dr. Colwell of Pittsburgh employs small amounts of blood, from 20 to 50 cc., at frequent intervals. He finds that in many patients the blood elements can be increased thereby. My belief is that blood given in such amounts is useful between transfusions of larger amounts, when there is difficulty in obtaining a suitable donor. It may prevent a fall in red blood cells and hemoglobin until such time as a transfusion of a larger amount can be given. Fifty cubic centimeters of blood will not, however, furnish sufficient blood elements to reduce urgent symptoms materially, and the use of small amounts of blood is not likely to be of much benefit in such states. Enough blood should be introduced to lessen or remove the symptoms resulting from the deficient oxygen-carrying power of the blood.

The plan that I use is as follows: In urgent cases, in which the patients are unconscious or stuporous, amounts of from 450 to 600 cc. are given. To patients who do not suffer from such severe symptoms and whose hemoglobin is between 20 and 30 per cent, and the red blood cells from 700,000 to 1,000,000, approximately 100 cc. is given at the first transfusion. The same amount is used for the first transfusion when the anemia is less severe. Serious reactions very frequently follow the first transfusion, and the administration of a small amount of blood lessens this danger. It is also to be noted that if more than a week elapses between transfusions, reactions occur more readily.

INTERVAL BETWEEN TRANSFUSIONS

In pernicious anemia the hemoglogin and red blood cells are increased following a transfusion, but in from three to seven days, in most instances, a drop of these elements occurs. This reduction is often greater than the previous increase, bringing the blood count to a lower level than before the transfusion. Because of this, when the interval between the transfusions is too long, the good accomplished by a single transfusion is lost. The result is similar when a second transfusion is given. Recently, a patient was seen who had received six transfusions of from 500 to 800 cc. every two weeks, whose red blood cells and hemoglobin were lower after the series of transfusions than before. Permitting too long an interval to elapse between transfusions is responsible for more of the poor results in pernicious anemia than any other single factor. To overcome this, the transfusions are given every three to five days, thereby adding blood elements before there is a decided decrease. With the use of these smaller amounts of whole blood, from 350 to 450 cc., depending on the weight of the patient, from every three to five days, it has been possible to bring the red blood cells and hemoglobin to a normal point in nearly every instance. In addition, when smaller amounts are given, a donor can be used more frequently.

REACTIONS

Reactions may occur with whole blood transfusions. They are of several varieties: (1) chilly sensations; (2) a rise in temperature of from 1 to 2 degrees; (3) a chill plus a rise in temperature; (4) urticaria, pruritus, subglottic edema, or pulmonary edema; (5) mild hemolysis characterized by petechiae, and (6) severe hemolytic reactions, petechiae, ecchymosis, jaundice or

* From the Department of Medicine, Jefferson Medical College of Philadelphia.
* Read before the Medical Section, College of Physicians, Philadelphia, Dec. 22, 1924.

hemoglobinuria. In the first four forms of reactions, the hemoglobin and red blood cells are not reduced. The hemolytic reactions are dangerous, and death may ensue.

There are difficulties which one is bound to meet in treating pernicious anemia by transfusion. If the patient is unfortunate enough to be a type I or type III (Moss), it may be difficult to find sufficient donors. Secondly, it may require from five to fifteen transfusions to bring about a normal blood count. It is seldom that the patient has a sufficient number of friends or relatives whose blood matches perfectly.

Results of Blood Transfusions in Treatment of Pernicious Anemia

	Sex*	Age	Normal Blood Count	Number of Transfusions	Relapses	Results	Time Since Last Transfusion	Time Since First Transfusion
1.	♂	48	Once	6	..	Working	7 years	7 years
2.	♂	39	Thrice	73	3	Hospital, ambulatory	2 weeks	36 months
3.	♀	42	Thrice	17	2	Working	4 months	2 years
4.	♂	60	Twice	26	1	Working	13 months	2 years
5.	♀	34	Twice	20	1	Working	15 months	21 months
6.	♂	58	Twice	17	1	Working	2 months	17 months
7.	♀	70	Thrice	16	2	Working	2 months	15 months
8.	♂	52	Twice	16	1	Working	2 months	14 months
9.	♂	38	Thrice	27	2	Very much improved	2 months	9 months
10.	♂	50	Four	29	3	Blood count normal; ataxia marked	1 month	8 months
11.	♂	60	Thrice	20	2	Working	2 months	8 months
12.	♀	42	Once	1	..	Working	6 months	8 months
13.	♀	40	Once	6	..	Working	4 months	5 months
14.	♂	68	Once	6	..	Working	3 months	4 months
15.	♀	42	Once	8	..	Well	2 months	3 months
16.	♀	52	Once	5	..	Improved	1 month	2 months
17.	♂	38	Once	11	..	Working	2 weeks	2 months
18.	♀	38	Once	1	..	Working	2 months	2 months
19.	♀	64	Nearly normal	3	..	Left hospital; unable to trace	.....	.....
20.	♂	40	Never	10	1	Left hospital; unable to get donors	.....	.....
				318				
				Transfusions		Resulting in Death		
21.	♂	52	Thrice	35	2	Death, pyonephrosis	.....	14 months
22.	♂	52	Twice	12	2	Death following transfusion	.....	11 months
23.	♀	60	Twice	12	2	Death; no donors	.....	12 months
24.	♀	72	Once	9	..	Death; refused more	7 months	8 months
25.	♀	38	Twice	15	1	Death	.....	8 months
26.	♂	70	Once	12	..	Death, pneumonia; blood normal at death	.....	4 months
27.	♂	38	Never	7	1	Death; no donors	.....	4 months
28.	♂	70	Never	3	..	Death; refused more	.....	2 weeks
29.	♀	48	Never	1	..	Death following transfusion	.....	.....
				119				
				318				
				437				

* In this column, ♂ indicates male; ♀, female.

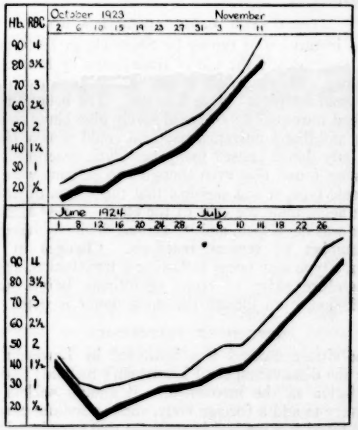
To obtain donors means the outlay of from $25 to $50 for each transfusion, and many cannot afford this. Then, too, until the hemoglobin is 50 per cent and the red blood cells 2,500,000, the improvement is usually much slower than after this point is reached. Sometimes several transfusions are given with seemingly very little improvement. These obstacles, however, are not insurmountable, and the results obtained warrant the effort. The results of some of our transfusions are given in the accompanying table.

RESULTS

Thirty patients were treated by transfusion; twenty are living; there were ten deaths.

Of the twenty living, the time that has elapsed since transfusion varies from a few weeks to seven years. The time elapsing from the date of the first transfusion varies from two months to seven years. In five patients, the blood has been brought to a normal count three times. In four patients, the blood has been brought to a normal count twice. Thirteen of the twenty patients are performing at least a part of their duties.

One patient in whom marked nervous phenomena developed was brought to a normal blood count three times in a period of fourteen months. Death resulted from pyonephrosis. The hemoglobin and red blood cells were practically normal at that time. One patient died of pneumonia. The blood count was normal. One patient, with a blood count nearly normal, died of a hemolytic reaction. One died because we were unable to get further donors for him. His blood count had been brought to normal twice. One patient refused



Results of transfusions in case 4. On each of the dates given, there was a transfusion of 400 cc. From November to June, the patient was well and working. Dec. 20, 1924, the patient was well, taking trips about the country, and in better health than for ten years. Light line, red blood corpuscles; heavy line, hemoglobin.

more transfusions after being brought to a normal count twice. One patient, after being brought to a normal count twice, died six hours after a transfusion given at the beginning of the third relapse. One died two days after the first transfusion. This is the only patient whom we were not able to bring to a normal count at least once with transfusions when donors were available.

WHAT WE CAN HOPE TO ACCOMPLISH BY MEANS OF BLOOD TRANSFUSION IN PERNICIOUS ANEMIA

1. Life in those patients who present urgent symptoms can be saved.

2. Unpleasant symptoms can be alleviated and the patient given added strength and hope.

3. A so-called remission can be stimulated.

4. The patient can be carried along at a higher nutritional level with the hope that a remission will result. It is reasonable to assume that he has a greater opportunity to develop a remission when the blood is above 50 per cent than when it is between 20 and 50 per cent.

5. What appears to be a cure in an occasional patient can be brought about.

In order to accomplish these results, the following points must be observed:

1. A small amount of blood (100 cc.) should be given at the first transfusion to offset the possibility of death in a very few cases, unless the patient requires a larger amount to carry him past the danger point.
2. Whole blood should be used.
3. Moderate amounts of blood, from 350 to 450 cc., should be given.
4. In the hemolytic stage, the amounts should be increased daily, beginning with 50 cc.
5. Transfusion should be employed at four-day intervals.

1426 Spruce Street.

VERY LATE ABSCESSES IN POST-OPERATIVE SCARS *

WILLIAM A. FISHER, JR., M.D.
AND
HARVEY B. STONE, M.D.
BALTIMORE

It is well recognized that tissues which have become infected may be subject to recurrence of acute inflammation for considerable periods after their apparent complete healing. This principle was emphasized by experience with wounds during the war. It soon became apparent that corrective and cosmetic operations on scars of battle wounds that had been originally infected were very apt to relight the previous activity of the infection, sometimes with disastrous results. Accordingly, it became a generally accepted rule to postpone any such contemplated improvement in scars for a period of at least a year after the final healing of the original wound.

The same experience has resulted from operative treatment of joints and bones that had formerly been the site of infectious processes. For instance, tuberculosis of the joint may be stirred into renewed virulence by attempts to correct deformities years after all evidence of activity has subsided. This raises the question as to how late one may possibly find recurrences of inflammation in tissues which have seemingly been entirely free of infection for a long interval. Experimental work on this subject would scarcely be feasible, and it is therefore of interest and of considerable practical importance to call attention to the group of cases here presented and their direct bearing on the question at issue. It is a common experience that suppurating wounds, after they have apparently healed, may develop recurrent abscesses within several days or a few weeks. It is unusual for trouble to manifest itself later than this. We present four illuminating cases from our personal experience, with no attempt to search the literature for further examples.

REPORT OF CASES

CASE 1.—*History.*—A white man, aged 37, had been operated on, Dec. 27, 1921, for gallstones. A diseased gallbladder and dilated common duct were found, with gallstones impacted immovably in the papilla of Vater; these gallstones were removed by a transduodenal incision and the wound was drained. The patient made an uneventful recovery and was discharged from the hospital with a completely healed wound in about five weeks.

Second Operation.—July 8, 1922, the patient returned with a large abscess in the old scar of about five days' duration. This was incised and drained, and a quantity of foul smelling pus with colon odor was evacuated; no foreign body, either gallstones or suture, was found. Unfortunately, no culture is recorded. The abscess cavity had dense scar tissue walls and evidently had formed within the old scar. The patient's postoperative condition was uneventful, and the drained wound healed promptly and has given no further trouble up to the present time. The interval between operations was six months.

CASE 2.—*History.*—A white man, aged 28, was operated on, Dec. 6, 1922. A well walled off appendix abscess was found lying on the outer side of the ascending colon, which was drained. A gangrenous appendix was removed, and the wound was drained. The patient made an uneventful recovery, his wound having completely healed in about six weeks.

Second Operation.—July 25, 1924, the patient presented himself complaining of pain and tenderness in the scar of the old incision, which had been noticed for the past four or five days. It had all the clinical signs of an abscess. He was operated on, and thick, colon-smelling pus was evacuated. A small particle of foreign body about the size of a pin head, which may have been the remains of a fecal concretion, was found. The wound healed uneventfully, and there has been no trouble since then. Unfortunately, in this case also no cultures were recorded from the pus. The interval between the operations was eighteen months.

CASE 3.—*History.*—A white boy, aged 12 years, was operated on, Aug. 1, 1919, for acute appendicitis; the usual removal of an acute unruptured appendix was done and the wound closed with silk sutures throughout. Healing was apparently by first intention and the patient was discharged as being well. After a few days at home an abscess developed in the wound, which was opened and a black silk suture was discharged. This closed in a few days and the wound then appeared to be completely healed.

Second Operation.—The patient had no trouble from his old incision until a short while before Dec. 9, 1925. He then began to complain of some tenderness about his old scar, and it was examined by several physicians; there was found a distinct, firm swelling under the skin scar, slightly tender on pressure and not noticeably changing on coughing or straining. There was some difference of opinion as to the exact nature of this condition, the two probabilities being postoperative hernia becoming incarcerated, or a recurrent abscess in the scar. The last opinion was the one considered more probable. December 9, the scar in the skin was excised, and the skin and subcutaneous fat were found normal, but under the aponeurosis of the external oblique was found an abscess with very dense fibrous walls containing about 2 drachms (7.5 cc.) of thick creamy pus, which was odorless and from which a growth of *Bacillus alkaligenes* was obtained. A small black particle, which was at first thought to be a remnant of silk ligature, proved to be a fragment of blood clot. The wound healed in a very short time and there has been no further trouble. The interval between operations was six and one half years.

CASE 4.—*History.*—A white man, aged 46, was operated on June 3, 1912, for right inguinal hernia. The usual operation was done and silk sutures were used in the closure throughout. The only complication in the postoperative course was a cystitis following catheterization. The wound at no time showed any evidence of infection.

Second Operation.—During the summer of 1919, the patient had swelling, pain and tenderness in the scar, of a few days' duration. This was opened by an incision, and a quantity of pus was discharged and with it a silk suture from the depth of the wound. The wound drained for a few days and healed promptly; there has been no subsequent trouble. The interval between operations was seven years.

COMMENT ON CLINICAL FACTS

Previous Infection.—Of these four cases, one was in origin a heavy infection, with drainage—case 2,

* From the Surgical Department of the Johns Hopkins University Medical Department.

gangrenous appendicitis with localized abscess. In case 1 there was potential infection, and drainage was done; a gallstone in the papilla of Vater was removed by the transduodenal approach. In case 3 there was a history of stitch abscess during convalescence from appendectomy. Case 4 was a clean hernia operation without any evidence of postoperative infection so far as the wound was concerned. This incidence of a previous infection of the wound in three out of four cases is of great significance, but perhaps of more arresting interest is the fourth case with no such antecedent history and yet with a definite abscess very late after operation and the discharge of a foreign body. Further discussion of the problems here involved will be advanced later.

Location of Scars.—It will be noted that all four of these operations involved the soft parts of the abdominal wall, with no involvement of bone or joint.

Character of Secondary Abscesses.—All the abscesses contained frank, creamy, "laudable pus"—not simply serum or serosanguineous exudate. A foreign body was found in the single case which had no history of a previous infection at the original operation, and also in the appendix abscess case. No fistula into a hollow viscus, and no implication of any abdominal organ was observed in any of the secondary abscesses. Unfortunately, bacteriologic study of these cases is sadly deficient. Two presented distinct colon odor of the pus, but the hospital records show no report as to cultures. In a third case the abscess was opened in the private office of one of us, and no cultures were made. The remaining abscess gave a growth on culture that was identified as the unusual organism—at least in surgical experience—*B. alkaligenes.*

Clinical Course of Cases.—These patients all presented the clinical signs of ordinary abscesses except in case 3, which lacked any very acute signs of inflammation; and in fact was not positively diagnosed as such, although this was considered the most likely diagnosis. This case was also the one from which *B. alkaligenes* was grown. All these abscesses healed promptly after the evacuation of pus, and no subsequent trouble has arisen in any of them.

A summary of the cases will show that, in periods running from six months to seven years, abscesses may make their appearance in tissues that were formerly operated on but which have apparently completely returned to normal in that interval. One must consider several possibilities in an attempt to reach an explanation of these facts. In the first place, it may be a mere coincidence that an abscess should pick out for its locus the scar of the former operation, just as an abscess may occur from various causes in any other portion of the body. This explanation is mentioned merely to include all the possible theories to account for such occurrences. It will not impress many as being highly probable. The second and a much weightier explanation is that scar tissue anywhere is a less resistant structure than normal tissue to the development of infection, and that this recurrent abscess may not be in the strict sense recurrent; in other words, a new infection may select scar tissue because of the known susceptibility of scar to injury of any sort. Case 3 was that of a boy who passed through an attack of measles shortly before operation for his abscess, which may lend some color to this idea; the implication being that, with measles, an infectious disease in itself, and with a lowered local resistance in the scar, the combination was provided which led to the development of the abscess. Case 4 is of even greater significance. This patient had no known infection of his original wound, yet seven years afterward an abscess developed about a silk stitch buried in old scar. This would seem strong evidence for the explanation of some cases at least as abscesses—not recurrent but de novo—in tissues of impaired vitality, with the added factor of nonabsorbable foreign bodies to aid in the development of infection.

A third, and in our opinion the most acceptable, conception of the process under consideration is that the tissues harbor in the site of the scar a persistent contamination with living organism during all the period of apparent quiescence. During this period the virulence of the bacteria is so feeble, and the general and local health of the tissues is so good, that a condition of balance is maintained, permitting the organisms to remain alive and presumably to multiply sufficiently just to sustain themselves, but on the other hand keeping them in such check that they are unable to cause any clinical symptoms of trouble. Then for some reason this balance is disturbed. This reason may conceivably include a great many possibilities concerning the local or general health of the tissue or the virulence of the organism. As a result of the disturbance, the bacteria take on renewed activity, become sufficiently virulent to give rise to acute inflammatory changes, and the clinical development of an abscess results. It would be unnecessary to attempt a detailed consideration of all the possible occurrences that may cause the balance to be upset: One at once thinks of general illness that lowers the health of the patient, of local injuries to the scar, and of changes in the body chemistry disturbing the intricate system of resistance to infection. Speculation along these lines is probably not profitable, although it may be interesting. The point that we wish to emphasize is the fact that these cases bear out in a brilliant manner the same clinical experiences already referred to in the opening of this paper, which has been illustrated by the war wounds and infected joints and bones; namely, that tissues once infected may harbor for a surprisingly long period organisms still potentially virulent, and that even as late as seven or eight years afterward renewed activity may take place.

Local Health Organization.—The exact plan of local health service that will fulfil all the essential requirements of any selected community must be adapted to the circumstances and conditions peculiar to that community. Because of climatic, geographic, political, social, racial, economic or other purely local characteristics, the vital health problems of one city may well differ from the particular problems that are of especial concern to some other city. This idea has led at times to the conclusion that it is impracticable to propose any standard or uniform basis for health department organization. As a matter of fact, however, many of the obstacles to be overcome in developing an adequate and comprehensive plan for community health service are imaginary rather than real ones. Man is subject to certain diseases and disturbances that obey rather fixed laws, irrespective of purely local conditions. In spite of such considerations, the essential public health problems in different cities differ not so much in their nature as in the comparative magnitude of the problems presented. There are certain basic requirements that should be fulfilled in practically every community, so that it is possible, therefore, to propose a more or less "ideal" health service that will at least represent minimum requirements.—Cumming, Hugh: *Pub. Health Rep.* **41**:372 (Feb. 26) 1926.

THE INTRACUTANEOUS SALT SOLUTION TEST

ITS USE AS A TEST OF THE EFFICIENCY OF THE CIRCULATION IN THE EXTREMITIES *

MILTON B. COHEN, M.D.
H. S. APPLEBAUM, M.D.
AND
E. L. HAINSWORTH, A.B.
CLEVELAND

In May, 1925, one of us [1] reported that the intracutaneous salt solution test, as devised by McClure and Aldrich [2] for the study of edema, afforded a simple method of determining the efficiency of the circulation in the extremities. The present report deals more fully with the nature of this reaction and with its clinical applications.

NATURE OF TEST AND MECHANISM OF ACTION

When 0.2 cc. of an 0.85 per cent salt solution is injected into the skin of a normal individual, sixty minutes or more is required for its complete absorption. In cases showing edema, the disappearance time is decreased in direct ratio to the degree of edema, and in extreme cases the injected fluid disappears so rapidly that it is impossible to produce a wheal. These observations hold true for all edema, whether it is of the so-called renal or cardiac types.

Aldrich [3] discusses the mechanism of this reaction and concludes that in cases of edema there is an increased affinity of the tissues for water. The injected salt solution is more rapidly taken up in edema because the tissues, needing more water, take it from the most available source, in this instance, the wheal produced by the injection. This explanation is based on the work of Martin H. Fischer,[4] who in 1908 first called attention to the rôle of the tissues in the production of the edemas. He postulated that the normal turgor of a tissue depended on the physical state of its colloids, and that edema resulted whenever the water holding power of its colloids was increased and there was an available supply of free water. This state could be brought about during disease processes by accumulation in the tissues of acids, amines or substances having a similar action. This theory was severely criticized by most of the recognized workers in medicine and the allied sciences, as it was a current belief that edema was the result of increased permeability of blood vessels and an increase in the intravascular pressure. These observers stated that they could not demonstrate any acidosis in the blood or tissue fluids by microchemical analyses, and therefore denied its existence in early edema and its relation to edema. Fischer has always maintained that one might have localized acidosis without any evidence in the blood, as determined by the usual methods of analysis, and recently this has been proved by Rous,[5] who demonstrated localized cutaneous acidosis in many conditions. In general, he found that all agents that interfered with tissue oxygenation produced this condition, which he called "outlying acidosis."

Subcutaneous injections of epinephrine were shown by Rous to produce outlying acidosis in the skin of a rat. The following experiment illustrates the effect of this substance on the salt solution disappearance time:

In a normal individual, 0.2 cc. of 0.85 per cent salt solution was injected intracutaneously in the right thigh. It disappeared in sixty-five minutes. A similar injection was made 15 cm. away from the first. Then 1 cc. of 1:5,000 solution of epinephrine was injected subcutaneously in the region of the wheal. This wheal required only forty-five minutes for its complete absorption. A third wheal produced by the intracutaneous injection of 0.2 cc. of 1:5,000 solution of epinephrine disappeared in thirty minutes.

Pilcher [6] has shown that the size of the wheal produced as a result of the intracutaneous injection of morphine can be reduced by subcutaneous injections of epinephrine, an observation that is the corollary of the foregoing finding.

There is good experimental evidence, therefore, for the belief that there is an increase in the rate of absorption of water from areas of localized acidosis and that such acidosis is commonly produced by anoxemia.

Localized acidosis can be produced by obstruction to the venous return just as readily as by inadequate arterial blood supply, as the stasis soon produces the latter condition. Patients with varicose veins afford interesting opportunities for study of the effect of stasis on the salt solution disappearance time, as the degree of stasis and its duration can be regulated by changes in position of the legs. The following protocol illustrates such a case:

In a patient with marked varicose veins of both legs with slight edema of each leg from the knee down, a standard wheal was produced on each side, at a point 5 cm. above the ankle. The patient was lying in bed. The wheal disappeared from the right side in five and one-half minutes, and from the left side in fifteen minutes.

The legs were then allowed to hang over the edge of the bed, with the patient sitting up. The test was repeated immediately. There was a marked increase in the cyanosis of both feet, and the veins were engorged. The wheal disappeared from the right side in two and one-half minutes and from the left side in eight minutes. The difference in stasis, i. e., the increased anoxemia produced by the change in position, halved the disappearance time.

CLINICAL APPLICATION

In cardiac disease during decompensation there is a stasis, especially in the dependent structures, which is comparable to that observed in cases showing varicose veins. During the decompensation, the disappearance time is lessened in the edematous areas, though it may be quite normal in areas such as the skin over the deltoid, where the circulation is adequate. As the circulation improves, the disappearance time increases. From a study of a number of cases tested during decompensation and after it had cleared up, it has been determined that pitting over the shins never occurs with a disappearance time over twenty-five minutes, and that it can usually be detected when the time has been reduced to twenty minutes or less.

In peripheral vascular disease also, the disappearance time is decreased in proportion to the degree of anoxe-

* From the Medical Service of Mount Sinai Hospital.

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mia produced by the vascular involvement. This is well illustrated in cases of intermittent claudication, diabetic gangrene and thrombo-angiitis obliterans, as the following protocols will demonstrate:

P. D., aged 38, a Russian Jew, was admitted to the hospital, July 8, 1925, complaining of severe pain in the calves of the legs on walking. The pain came on after walking about 300 yards, and was so severe that he could not proceed but was forced to rest. In a few minutes the pain disappeared and walking could be resumed, only to be again interrupted after exercise. The pain was most marked in the right leg.

Physical examinations and the usual laboratory tests revealed no serious organic disturbances. The dorsalis pedis and posterior tibial arteries could not be palpated on either side. The Pachon oscillometer showed marked diminution in the circulation in both legs from the lower third of the thigh down, most marked on the left. The results of the salt solution test on the day of admission are given in table 1.

TABLE 1.—*Results of Salt Solution Test in First Patient*

	Right Leg, Minutes	Left Leg, Minutes
Base of great toe	5	9
Ankle	16	13
	24	48
	21	77
	72	78
Below knee	80	85
Above knee	78	80

A diagnosis of Buerger's disease with intermittent claudication was made, and sympathectomy was advised. Periarterial sympathectomy was performed on the right femoral artery, July 13. The next day the reading at the base of the right great toe was twenty minutes, and on the second day following the operation it had risen to forty minutes.

A. B., a woman, aged 58, was admitted to the hospital, June 4, 1923, because of superficial gangrene of the left great toe, occurring in the course of neglected diabetes. Under dietetic management the toe healed, and she was discharged to the outpatient department. She was readmitted one year later, in June, 1924, with a recurrence of the same condition. The lesion healed again under appropriate conservative treatment. April 14, 1925, she was admitted for the third time with a similar process involving the right great toe. The necrotic material was infected, and the whole foot was swollen. Her general condition was poor, as there was marked arteriosclerosis with hypertension but without nephritis. The left foot, which had been involved on the two previous occasions, showed the loss of small bits of the distal phalanges of the two inner toes. The peripheral pulses on this side were palpable. On the gangrenous right side, no pulses could be detected in the popliteal, dorsalis pedis or posterior tibial vessels. The results of the salt solution test performed two days after admission are given in table 2.

TABLE 2.—*Results of First Salt Solution Test in Second Patient*

	Right Side, Minutes	Left Side, Minutes
Middorsum of foot	15	55
Ankle	45	60
	60	70
	65	70
	65	80
Below knee	70	80
Above knee	70	80

Because of the relatively good results previously obtained by conservative treatment in this case and the small reduction in circulatory efficiency as indicated above, medical treatment was carried out. The gangrene spread slightly during the next two weeks. The infection did not respond well to the treatment, and the patient was septic. The salt solution test was repeated on the fifteenth day, with results as given in table 3.

From the result of the second test, it was obvious that the circulatory deficiency was increasing in the right leg, and that in the left leg gangrene was impending if the deficiency continued to increase. On the fourth day following this test,

TABLE 3.—*Results of Second Salt Solution Test in Second Patient*

	Right Side, Minutes	Left Side, Minutes
Middorsum of foot	9	25
Ankle	17	35
	20	39
	27	62
	36	65
	41	68
Below knee	44	68
Above knee	51	70

gangrene set in in the left foot. Five days later the test was repeated with results as given in table 4.

On the next day both legs were amputated at the junction of the middle and lower thirds of the thigh.

The pathologic report showed very marked atherosclerotic changes in the femoral popliteal perineal and anterior tibial vessels with occlusion of the last two in places by medial sclerosis and plaques. All of the vessels were markedly narrowed. The posterior tibial artery was almost entirely obliterated by endarteritis. The left leg showed a picture similar to that shown by the right. All vessels from the popliteal space down were narrowed and occluded in places by plaques.

In this case changes in the clinical condition of the patient were accurately followed by means of the salt solution test, and the oncoming gangrene of the left leg was indicated several days before it became manifest.

TABLE 4.—*Results of Third Salt Solution Test in Second Patient*

	Right Side, Minutes	Left Side, Minutes
Middorsum of foot	7	12
Ankle	7	12
	8	13
	12	14
	17	15
	39	18
	45	23

An interesting case which illustrates the value of this test in differential diagnosis was reported to us by Dr. Walter G. Stern:

A man, aged 62, was crushed between the bumpers of two street cars. On admission to the hospital he was in profound shock; the right thigh was tremendously swollen, purple and cold. No peripheral pulses were palpable in the injured leg. The clinical diagnosis depended on differentiating between shock and massive hemorrhage from rupture of the femoral artery. The intradermal salt solution test showed a disappearance time within normal limits, and a diagnosis of shock without rupture of the femoral artery was made. The patient died, and at necropsy the hemorrhage was found due to muscle injury and not to rupture of any large vessel. It was by means of this test that the surgeon was spared the embarrassment and the patient the further injury of an operation.

CONCLUSIONS

1. The intradermal salt solution test is a rapid and accurate method of determining tissue affinity for water.

2. Sixty minutes or more is the normal disappearance time.

3. In all conditions associated with localized anoxemia, the salt solution disappearance time is decreased.

4. In cardiac disease with decompensation, the disappearance time is always twenty minutes or less in

the edematous areas. If there is no decompensation, normal values are obtained.

5. In cases with peripheral arterial disease, the disappearance time is always decreased in areas showing clinical involvement. From observations in thirty-five cases, it has been noticed that readings below ten minutes have been found only in tissues immediately above areas of gangrene. Readings between ten and twenty-five minutes are strongly suggestive of developing gangrene.

10616 Euclid Avenue.

THE TREATMENT OF CARDIAC PAIN BY PARAVERTEBRAL ALCOHOL BLOCK *

GEORGE I. SWETLOW, M.D.
AND
SIDNEY P. SCHWARTZ, M.D.
NEW YORK

In recent years the surgical treatment of cardiac pain has received much attention. The objective of the surgeon is to sever the pathway that conducts pain stimuli from the heart to consciousness. The identification of this pathway is based largely on comparative neuroanatomic studies. These investigations show that these structures vary not only in different animals but in man as well. Because of the insufficiency of the anatomic knowledge, as many as eight different operations have been devised for the relief of cardiac pain. The following briefly summarizes the operations that have been performed:

Cervical sympathectomy, including resection of the stellate ganglion on the left side and at times bilaterally.[1]

Section of the depressor nerve on the left side and at times bilaterally.[2]

Section of the sympathetic cord above the stellate ganglion on the left side.[3]

Section of a nerve fiber emerging from the vagus nerve on the left side alone or at times bilaterally.[4]

Cervical sympathectomy without resection of the stellate ganglion on the left side and at times bilaterally.[5]

Resection of the sympathetic cervical cord (without the inferior cervical ganglion) completed by section of the cervical vagus branches which enter into the thorax as well as the so-called vertebral nerve and the rami communicantes, which unite the stellate ganglion with the sixth, seventh, eighth cervical and first dorsal nerves.[6]

Section of the cervical sympathetic, together with the superior cardiac nerve on the left side.[7]

Section of the cervical sympathetic above the inferior cervical ganglion, including section of the vertebral nerve on the left side.[8]

This enumeration gives ample evidence of the insufficiency of the anatomicophysiologic knowledge of the pathway of pain from the heart to the thalamus, and suggests sharply an uncritical attitude on the part of those who subject patients to an operation based on such fragmentary understanding. Sir James Mackenzie [8] has bitterly opposed reckless operative intervention based on such meager scientific data.

In reviewing the operative results, conflicting and discouraging information was obtained. In a series of sixteen cases, Coffey and Brown [7] reported that only six patients were completely relieved; that there was a mortality of 12.5 per cent; that the operative residua, i. e., Horner's syndrome, severe constant sharp pain over the left half of the head, chest and left arm, were frequent and troublesome. Jonnesco [9] in his operations showed graphically the dangers of operative intervention in the absence of any adequate knowledge of the physiology of the cervical sympathetic. Two of his patients died from pulmonary edema four hours after the operation; one was found dead the day following operation with the same phenomenon of pulmonary edema; another was found dead in his bed the morning following the operation; a fourth died several hours after; a patient of Hofer's died fifteen hours after the same operation. These represent only a few of the fatalities following operative intervention of the sympathetic for relief of angina pectoris.

It is our purpose to report on the use of paravertebral alcohol injections into the dorsal root ganglions and rami communicantes as a more rational and absolutely safe procedure for the relief of cardiac pain. Procaine has been injected paravertebrally for relief of angina pectoris and aortalgia by Danielopolu and Hristide,[10] Luger,[11] Pal,[12] Brun and Mandl,[13] Mandl [14] and Kappis.[15]

The employment of paravertebral alcohol block to relieve pain in malignant disease [16] of the chest as well as in a variety of other conditions [17] has given us such gratifying results that its use in the different types of cardiac pain seemed worth investigating.

THEORY ON WHICH METHOD IS BASED

Nearly all pain impulses, irrespective of their point of origin and of their pathway in the spinal cord, ultimately enter the spinal cord through the dorsal root ganglions. Constant stimulation of the small cells in the dorsal root ganglions by impulses coming from the heart is referred to the skin segments supplied by the respective ganglions, which in turn refer this irritation to the consciousness as pain. The axons of these small cells are unmyelinated and form fibers which convey protopathic stimuli. The introduction of alcohol into these irritable nerve fibers produces a wallerian degeneration. The site of the injection is determined by carefully mapping out skin areas of hyperesthesia, hyperalgesia and hyperthermesthesia on the chest wall. The nerve roots and dorsal root ganglions that supply the areas of increased epicritic and protopathic sensibility are presumably the ones kept in a state of irritation by the bombardment of afferent impulses from the heart. With the usual technic of paravertebral injections, from

* Read before New Utrecht Medical Society, Nov. 23, 1925.
* From the Medical Division, Montefiore Hospital for Chronic Diseases.

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3 to 5 cc. of an 85 per cent solution of alcohol is injected into the nerve roots identified by the foregoing procedure.

REPORT OF CASES

CASE 1.—*History.*—R. C., a woman, aged 20, with aortitis and aortic insufficiency caused by congenital syphilis, began to complain of pain in April, 1923. In the beginning, the pain appeared over the precordium. In a few months the discomfort extended to the left shoulder blade and down the left arm and the back of the chest on the left side. The arm pain was sticking and constricting in character and especially worse during the night. Since April 17, 1924, the pain had been much more severe. The attacks consisted of paroxysms of severe sticking pains lasting a few minutes and leaving in their wake a dull ache over the same area. These paroxysms were brought on with only slight exercise, and as a result greatly curtailed physical activities.

She received a course of arsphenamine and mercuric salicylate, which was completed, Oct. 2, 1924; potassium iodide, which was discontinued several months ago, and a series of injections of bismuth subsalicylate.

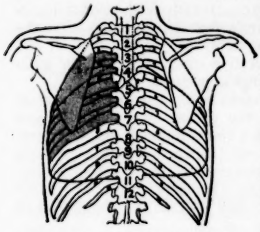


Fig. 1.—Sensory findings before injection.

Following this series of treatments she was slightly more comfortable, but the pain still persisted. A paravertebral alcoholic injection was performed, April 23, 1925. After the injection into the fourth, fifth, sixth and seventh dorsal roots on the left side, the patient was almost completely relieved of pain, and in addition was able to carry on increased physical activity to exhaustion without attacks of pain.

For example, before the injection of alcohol she was unable to walk more than one block without developing sharp, excruciating, sticking pain over the left chest anteriorly and posteriorly, with radiation to the left arm as far down as the hand. The pain was so severe that she was forced to stop, the distress lasting two or three minutes at a time. At present she is able to walk from five to ten blocks, and although she at times develops pain, she asserts that it is so mild and fleeting that she pays but little attention to it. Previous to the alcoholic injection she found that on attempting to practice on the piano more than ten or fifteen minutes she would be forced to stop because of the agonizing pain. Now she is able to play for at least one hour and at times more. Only occasionally has she a fleeting short pain over the left precordium.

Sensory Findings.—April 22, 1925, before the injection:

A. Epicritic sensibilities.
   1. Hyperesthesia to light touch with cotton wool extended from the third to the seventh dorsal nerves on the left side anteriorly and posteriorly.
   2. The patient was able to discriminate temperatures ranging between 26 and 38 C. over the same region.
   3. Cutaneous localization was well performed.

B. Protopathic sensibilities.
   1. A zone of hyperalgesia to pin prick extended from the third to the seventh dorsal nerves on the left side.
   2. A marked hyperthermalgesia was observed on the left side of the chest to temperatures above 45 and below 20 C. when compared to the right side. She was able to recognize these extreme differences in degrees on the left side.

June 1, thirty-nine days after the injection:

A. Epicritic sensibilities.
   1. A zone of hypesthesia to light touch with cotton wool extended from the third to the seventh dorsal nerves on the left side. In fact, she hardly perceived the stroke of the cotton wool.
   2. She was definitely unable to discriminate over the injected segments temperatures ranging from 26 to 38 C.
   3. Cutaneous localization was greatly impaired.

B. Protopathic sensibilities.
   1. An area of hypalgesia to pin prick extended from the third to the seventh dorsal nerves on the left side.
   2. A marked hypothermalgesia was found on the left side extending from the third to the seventh dorsal nerves when compared with the right side. There was great impairment in her ability to discriminate between extremes of temperature on the left side, i. e., between 20 and above 45 C.

Conclusion.—1. Before injection, a zone of dermatomic irritability extended from the third to the seventh dorsal nerves on the left side. Sensory examination thirty-nine days after the injection showed that the nerve conductivity was greatly reduced.

2. The patient had been free from pain for four months when she was discharged from the hospital. Oct. 25, 1925, we received a letter from her in which she reported that she is able to walk distances as long as a mile without the appearance of pain.

CASE 2.—*History.*—F. S., a man, aged 63, with angina pectoris due to coronary sclerosis, complained for the first time fifteen months before admission of a severe boring, retrosternal pain which penetrated anteroposteriorly. Frequently he observed that the pain was burning in nature, simulating "a feeling of hot sand." At times it was so excruciating as to induce crying. The pain would persist from twenty to twenty-five minutes, requiring morphine for its control. He could not walk any farther than three blocks at a time, for if he did, agonizing pain ensued. Twice this necessitated his being taken from the street to a hospital in an ambulance. Inhalation of amyl nitrite often relieved the attacks. Several months before we saw him he felt for the first time slight burning paresthesia down the left upper extremity.

June 25, 1925, he received a paravertebral injection of alcohol into the third, fourth, fifth and seventh intercostal nerves on the left side. Five cubic centimeters of an 80 per cent alcohol solution was used in each dorsal root. Following the injection, the pains were completely relieved within twenty-four hours. There was practically no limit to his ability to walk. He was up and about most of the day doing errands in the hospital, and definitely asserted that he was relieved of his pain. Nevertheless, he complained of shortness of breath when he exerted himself unduly, which was a very prominent symptom.

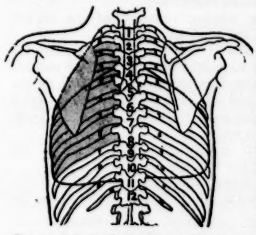


Fig. 2.—Sensory findings before injection.

Sensory Findings.—June 23, 1925, before the injection:

A. Epicritic sensibilities.
   1. A zone of hyperesthesia to light stroking with cotton wool was found over the skin supplied by the second to the eighth dorsal nerves on the left side both anteriorly and posteriorly.
   2. No disturbance was observed in his ability to discriminate temperatures ranging between 20 and 38 C. He had no difficulty locating areas lightly touched.

B. Protopathic sensibilities.
   1. An area of skin hyperalgesia to pin prick extended from the second to the eighth dorsal nerves on the left side.

2. An extreme hyperthermalgesia was present on the left side when compared with the right side. He was able to distinguish these extremes of temperature on the left side.

October 24, 183 days after injection:

A. Epicritic sensibilities.
1. The patient hardly perceived being touched with cotton wool when stroked lightly over the dermatomic segments supplied by the injected nerves.
2. He was unable to discriminate temperatures ranging between 20 and 38 C.
3. Cutaneous localization was completely lost.

B. Protopathic sensibilities.
1. The patient could not feel the pricking of a pin over the areas of the skin supplied by the injected nerves. He experienced a peculiar dysesthesia; as he put it, "dull and frozen" when a pin was drawn across the skin.
2. His inability to discriminate the extremes of temperature was quite marked. In fact, there was an almost complete analgesia.

Conclusion.—1. Before injection, a dermatomic zone of irritability was delineated. This extended on the left side over the skin supplied by the second to the eighth dorsal nerves. A sensory examination 183 days after the injection indicated that the nerve conductivity was greatly decreased.

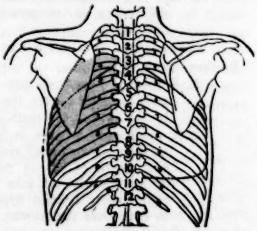


Fig. 3.—Sensory findings before injection.

2. He was completely relieved of all pain for a period of four months, when it again appeared. Reinjection was done, this time blocking the first, second, third and fourth dorsal root ganglions and rami communicantes. Before the second injection, the level of root hyperirritability was from the first to the third dorsal root segments. Following the injection, signs of diminished conductivity were noted. He is now again comfortable and free from all pain. He complains, however, of a pressing sensation over his shoulders when he attempts to rise from a sitting position, as well as slight retrosternal pressure.

CASE 3.—*History.*—Y. S., a woman, aged 18, suffered from mitral stenosis and insufficiency together with cardiac decompensation. Fifteen months before admission she developed precordial pain for the first time. She described it as sticking in character, lasting from a few minutes to as long as an hour. At times the attacks of pain would appear during the night, awakening her from sleep. She complained that with the sticking pain there was a burning sensation in the skin. These attacks would appear for a few successive days and then disappear, only to reappear again. However, for four months preceding our treatment, the pain had been persistent, always more or less severe. During the ten days before injection the agony was especially disturbing, being both sticking and constricting in type, with no remission either by day or by night. The pain was particularly severe in the left interscapular region, preventing her from reclining on her back. June 25, 1925, 4 cc. of a 60 per cent alcohol solution was injected into the third, fifth, seventh and ninth dorsal roots. After the injection she experienced precordial pain only occasionally, and that which she did feel was slight and fleeting in character. She was able to recline on her back without pain or discomfort over the precordium. Within one week of injection she observed a peculiar itching paresthesia over the site of the injection. On scratching it she noted that there was very little sensation induced when she rubbed the skin.

Sensory Findings.—June 23, 1925, before the injection:

A. Epicritic sensibilities.
1. The dermatomic skin areas extending from the third to the eighth dorsal nerves on the left side both anteriorly and posteriorly showed a marked hyperesthesia. She noticed that light stroking with cotton wool induced an unpleasant scratching sensation.
2. Her ability to discriminate temperatures varying between 20 and 38 C. was normal.
3. Cutaneous localization was well performed.

B. Protopathic sensibilities.
1. A dermatomic zone of hyperalgesia extended from the third to the eighth dorsal nerves on the left side.
2. In the same dermatomic zone hyperthermalgesia was observed in comparison to the right side. Temperatures below 20 and above 45 C. were used. There was no disturbance in her ability to recognize extreme temperatures on the left side.

September 11, seventy-eight days after the injection:

A. Epicritic sensibilities.
1. There was no disturbance in her ability to feel the light touch of cotton wool.
2. There was no disturbance in her discrimination of temperatures ranging between 20 and 30 C.
3. Cutaneous localization was unimpaired.

B. Protopathic sensibilities.
1. Her reaction to pin prick on the left side was only slightly below normal.
2. Her ability to discriminate on the left side between extremes of temperature, i. e., below 20 and above 45 C., was greatly impaired. When compared with the right side there was a definite hypothermalgesia.

Conclusion.—1. This patient was injected with a weaker alcohol solution, i. e., 60 per cent.

2. The sensory findings after the injection showed the conductivity of the dorsal nerves to be only slightly decreased as compared with the previous two cases, in which an 80 per cent solution was injected.

3. The patient was free from all pain for fourteen weeks, finally dying from cardiac decompensation.

CASE 4.—*History.*—J. W., a man, aged 61, suffering from angina pectoris associated with coronary disease and cerebral thrombosis, had for the past four years been complaining bitterly of precordial pain. At first the distress was brought on by walking two blocks, and caused such pain that he had to pause to rest. As time passed, he observed that walking even much shorter distances induced pain. He described this pain as sticking, tearing and at times constricting in character. These attacks would appear two or three times daily, each lasting from twenty to thirty minutes. For the past eighteen months he had been unable to walk more than 20 yards because of the induced agony. Every morning at about 2 o'clock he was awakened by severe precordial pain persisting from thirty minutes to an hour. He sat up in bed grasping the precordium. Occasionally he had a fear of impending death. June 12, 1925, a paravertebral alcoholic injection was performed. An interesting phenomenon occurred while the patient was on the operating table. He suddenly started to groan with pain, which was localized to the precordium. Accompanying this excruciating agony he became cyanotic. While he was in the throes of this anguish, 5 cc. of 1 per cent procaine solution was introduced paravertebrally into the first and second dorsal nerves. Within thirty seconds pain had completely ceased. Five minutes later 5 cc. of an 80 per cent solution of alcohol was introduced into each of the two dorsal nerves. The next day he walked 150 yards as fast as he could, and although he became alarmingly cyanotic and dyspneic, he definitely asserted that he had no pain. Since the treatment he has been able to walk about comfortably with almost complete absence of precordial pain. He has had no further attacks of nocturnal pain.

Sensory Findings.—June 11, 1925, before the injection:

A. Epicritic sensibilities.

1. A zone of hypesthesia extended over the entire left side of the chest both anteriorly and posteriorly.
2. The patient had great difficulty in discriminating differences of 5 degrees of temperature on the left side both anteriorly and posteriorly.
3. Cutaneous localization was definitely impaired over the entire left side.

B. Protopathic sensibilities.

1. An area of hyperalgesia extended over the skin segments supplied by the first and second intercostal nerves on the left side.
2. A zone of hyperthermalgesia was observed on the left side over the first and second intercostal spaces. The patient found no difficulty in discriminating between extremes of temperature over the hyperirritable zones.

Conclusion.—1. Because of attacks of angina pectoris, the chest of a patient suffering from thrombotic process both in the interbrain and in the coronary arteries was examined by sensory tests, which revealed disturbances in the afferent systems conveying impulses to the thalamus. Nevertheless, a zone of hyperalgesia was found over the skin areas supplied by the first and second intercostal nerves on the left side.

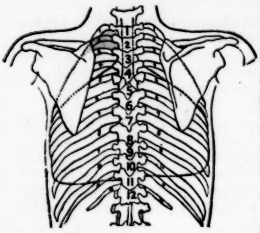


Fig. 4.—Sensory findings before injection.

2. Because of signs pointing to a progression of the thrombotic process in the thalamus, it became quite evident that little information would be obtained by comparing the sensory examination of the chest before injection with that after the injection.

3. No ill effects or complications of any kind following the injections have been observed.

CASE 5.—*History.*—N. B., a man, aged 65, suffering from angina pectoris due to coronary sclerosis, had complained of pain over the heart for a period of two years. The pain was chiefly located over the precordium and radiated down the left upper extremity and was described as constricting in nature, and at other times as sticking in type. Often the pain was boring, seeming to penetrate anteroposteriorly. The attacks often occurred two or three times daily. Almost nightly, at about 2 in the morning, he would be awakened by a terrific pain over the precordium, accompanied by a sense of suffocation and a fear of impending death. Venesection was resorted to several times. Morphine relieved him, but amyl nitrite was of little avail. Physical examination showed a greatly enlarged heart with a marked dilatation of the aorta. A paravertebral injection of alcohol was made into the second, third, fourth and fifth dorsal roots, which relieved him of further attacks both day and night. Shortness of breath still persisted on exertion. Since the alcohol injection, the patient has had several attacks of pulmonary edema with absence of pain. Before the treatment was given, these attacks were always accompanied by severe agonizing pain.

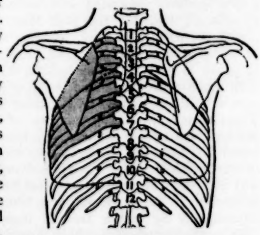


Fig. 5.—Sensory findings before injection.

Sensory Findings.—Sept. 15, 1925, before the injection:

A. Epicritic sensibilities.

1. A zone of hyperesthesia to cotton wool was found over the skin supplied by the first to the sixth intercostal nerves on the left side.
2. There was no disturbance in the patient's ability to discriminate temperatures ranging between 20 and 38 C.
3. Cutaneous localization was well performed.

B. Protopathic sensibilities.

1. A zone of hyperalgesia extended over the skin supplied by the first to the sixth intercostal nerves on the left side.
2. There was greatly increased reaction on the left side to temperatures below 20 and above 45 C. He had no difficulty in recognizing these extremes of temperature on the left side.

November 15, sixty days after the injection:

A. Epicritic sensibilities.

1. There was a marked hypesthesia, which extended over the skin on the left side supplied by the first to the sixth intercostal nerves, respectively. In fact, he hardly perceived the stroking of the cotton wool over the skin.
2. He was completely unable to discriminate fine differences in temperature; i. e., between 20 and 38 C.
3. Cutaneous localization was greatly impaired.

B. Protopathic sensibilities.

1. A zone of hypalgesia practically approaching analgesia extended over the skin segments supplied by the first to the sixth intercostal nerves.
2. A marked disturbance in his ability to discriminate between extremes of temperature, i. e., below 20 and above 45 C. on the left side, was noted. When the affected area was compared with the right side a definite hypothermalgesia was noted to exist over the former.

Conclusion.—1. Before the injection of alcohol, a zone of hyperirritability existed over the dermatomes supplied by the first to the sixth intercostal nerves. Sixty-one days after the injection, the conducting function of these intercostal nerves was greatly curtailed.

2. There was no return of pain in spite of the continuance of attacks of pulmonary edema. Nov. 19, 1925, he died suddenly during one of these attacks. He had been relieved for a period of nine weeks.

Careful electrocardiographic studies were carried out in detail on all patients before and after treatment both at rest and after exercise. The results are so variable that at present no conclusions can be drawn.

CONCLUSIONS

1. In attempts to relieve angina pectoris by operation, there are dangers and inconsistencies.

2. Five patients were relieved of severe cardiac pain by paravertebral injections of alcohol.

3. The results indicate a new, efficacious, simple and harmless method of alleviating severe cardiac pain.

Gun Hill Road near Jerome Avenue.

Treatment of Tuberculosis.—Open air in the treatment of phthisis should be as complete as possible, and the patient must be inured to it gradually. In particular, it is to be insisted that the patient be exposed to full daylight, unobstructed by glass. This is a very important element in open-air treatment, but sun, unless the air is cold, is safest avoided by patients with active lung disease. A prolonged sunning may lead to undesirable congestion of the tuberculous areas. The effect of open air, and especially of cold air breathed, seems to be a stimulation of metabolism, leading to increased appetite and well being.—Riviere, Clive.

EFFECT OF PARATHYROID HORMONE ON CERTAIN SIGNS AND SYMPTOMS IN TUBERCULOSIS

PRELIMINARY REPORT *

BURGESS GORDON, M.D.
JESSE L. ROARK, M.D.
AND
A. KENNETH LEWIS, M.D.
PHILADELPHIA

There has been much speculation as to the relation of calcium metabolism to the healing of tuberculosis. That some relation exists has naturally been suggested by calcification occurring in healed tuberculous lesions; but that calcium alone has a definite influence is questioned, although it has long been advocated in the treatment of tuberculosis. We have in the use of parathyroid hormone, elaborated by Collip,[1] a means for increasing the amount of calcium in the blood and possibly of affecting the calcium metabolism. The present study is concerned with this effect on lesions, and certain features and complications in tuberculosis.

A series of sixty patients in various stages of tuberculosis has been observed for periods ranging from up to a few days to four or five months. A further number of patients with other forms of pulmonary infection have been included in the study for control purposes. This additional series was utilized as a means for noting changes in special signs and symptoms which could not be clearly differentiated in the tuberculous group. It is not our purpose at this time to give more than a preliminary note on the effect of parathyroid hormone, because the patients have not been followed for a sufficient period of time to justify a final statement. There are a number of observations, however, which seem to warrant this preliminary report. In presenting the data, we realize the difficulty of attributing certain phenomena as due exclusively to the medication. Rest in bed, psychic influences and secondary infections at times confuse the real picture of tuberculosis and give a false impression of the progress of the disease. Symptomatic observations should not be the determining evidence of therapy but only suggestive of it. They are mentioned in this report with this feeling in mind. At the beginning of the investigation, an effort was made to rule out the effect of rest as a factor to the progress of the disease by selecting patients who had been under a routine hospital management for a considerable period without improvement. A small number of patients with acute complications on admission were given treatment without delay.

Objective and subjective observations were made at frequent intervals. The objective findings consisted of roentgen-ray observations, blood calcium and blood clotting determinations, strength tests, and laryngeal examinations with a recording of the weight, temperature, pulse rate and blood pressure. The subjective observations were necessarily limited to symptoms that were recorded daily. To prevent the patients from comparing notes, the studies were carried out in separate groups in which no contact was possible, so that the patients could not suggest improvement to one another. There were no changes made in the diets or in the usual routine of treatment. So far as possible all medication was discontinued, with the exception of parathyroid hormone. Special complications, such as hemorrhage, laryngeal involvement, pleurisy and gastrointestinal disturbances, were relieved when necessary by the usual measures, but were observed specially for any effect that might be attributed to the parathyroid hormone.[2] The hormone was given subcutaneously; the dosage at the start of the investigation was between 10 and 20 units daily. Later, it was found that certain changes occurred in patients in whom the large dosage was used, and this led to reduced dosage of hormone and a plan of treatment which had to do primarily with the clinical signs rather than with the level of calcium in the blood. The Clark and Collip[3] modification of the Kramer and Tisdall method was used in making the calcium determinations. After the first few injections of hormone, the determinations were made every six or twelve hours. When the calcium level was found fairly constant and there were no clinical signs of hypercalcemia, the estimations were made every six days.

CHANGES NOTED AFTER USE OF PARATHYROID HORMONE

Strength.—It was found that a number of patients showed a striking general increase of strength after the first few injections of parathyroid hormone. The strength of grip, as determined by a dynamometer apparatus, also showed a progressive weekly increase. The strength was maintained more constantly during repeated tests every few minutes than before treatment was instituted. There seemed also to be less tendency for the ambulatory patients to tire under moderate exercise. There were several patients, however, who appeared to lose strength during treatment, the strength being regained following the withdrawal of the medication, or if it was given in smaller dosage. Utilizing this information, a later series of patients was given the hormone in smaller dosage, with less striking but generally more favorable results.

Muscular Pain.—It was observed that pain and cramps in the calves of the legs and in other parts frequently disappeared and did not recur after the first few injections. Arthritic pains were less frequently relieved. In two patients, aching in the knee and elbow joints developed during treatment. These symptoms were attributed to the medication because they ceased after the hormone administration was discontinued.

Warmth.—A subjective feeling of warmth was not uncommon, quite often limited to the feet and legs but also noticed in the face and other parts of the body. There seemed to be some relation between the time of administration and the sensation of warmth, the latter appearing at its height in from two to four hours following the hormone injection, regardless of the time of day. The patients, however, stated that they usually felt warmer at all times than they did before the treatment was instituted.

Respiratory Symptoms.—The changes referable to the respiratory apparatus were numerous and varied

* From the medical service of Dr. Thomas McCrae and the Department for Diseases of the Chest, Jefferson Hospital.
* A part of the expense for this investigation has been defrayed by a grant from a fund in memory of Roland L. Taylor, Jr., of Gwynedd Valley, Pa.

1. Collip, J. B.: The Extraction of a Parathyroid Hormone Which will Prevent or Control Parathyroid Tetany and Which Regulates the Level of the Blood Calcium, J. Biol. Chem. **63**: 395 (March) 1925.

2. The preparation of hormone used was para-thor-mone supplied by Eli Lilly & Company through the kindness of Dr. G. H. A. Clowes and Dr. J. E. Warvel.

3. Clark, E. P., and Collip, J. B.: A Study of the Tisdall Method for the Determination of Blood Calcium, with a Suggested Modification, J. Biol. Chem. **63**: 461 (March) 1925.

widely in different individuals. However, when present, they occurred with remarkable constancy in relation to the dose of hormone and plan of treatment.

A most common symptom was dryness of the throat, which occurred after a total dosage of from 30 to 40 units of hormone, when the calcium was elevated to 13 or 14 mg. per hundred cubic centimeters of blood. The dryness generally continued until a lower dosage of parathyroid hormone was used and the blood calcium level correspondingly reduced.

In five patients with moderately advanced laryngeal tuberculosis, there was some decrease of pain with less difficulty in swallowing after the first or second week of treatment. In some of these patients, however, who developed dryness of the throat there was later an increase of the pain with dysphagia. These symptoms subsided during a reduced dosage of the hormone, except in two patients in whom it was necessary to discontinue the treatments.

It seemed at first that the patients with a productive cough were definitely relieved during the hormone injections. The amount of expectoration was decreased, and it appeared that the tendency to cough was lessened. As the treatment progressed, however, there were several instances of increased coughing which apparently continued until the dosage of the parathyroid hormone was reduced. The patients with a dry, hacking cough were usually more uncomfortable following the first few injections because of increased coughing and curious tickling sensations in the chest and throat. They seemed to expectorate considerable quantities of mucus, which appeared to originate in the throat. These unpleasant symptoms were usually prevented, and there appeared to be considerable general improvement if less frequent injections and smaller dosage of the hormone were used.

In four patients there was marked relief from attacks of dyspnea soon after the administration of 10 units of hormone. The improvement occurred in the chronic fibroid types of tuberculosis with acute respiratory complications.

Pain in the chest, both of muscular and of pleural origin, was often relieved after the first or second day of treatment. This observation is quite fairly open to criticism, because pain occurs and disappears repeatedly without apparent cause. However, the acute pleurisies seemed to respond far more rapidly after the parathyroid hormone injections than following other measures for the relief of pain. Four patients who had been suffering for several days from extremely painful pleurisy, unrelieved by narcotics in ordinary dosage, showed marked improvement within a few hours after the injection of 10 units of parathyroid hormone. There were other instances with less severe pain, but the results were nevertheless striking.

The observations on the respiratory symptoms emphasize the importance of carefully noting daily changes in the patient's condition. It was possible to increase the comfort of the patient by giving the parathyroid hormone, but if the dosage was excessive, or if the intervals between injections were not sufficiently long, the former symptoms were apt to return quickly with aggravation. The dryness in the throat and irritative coughing were especially characteristic of overdosage.

Gastro-Intestinal Symptoms.—The immediate effect of the parathyroid hormone on gastro-intestinal symptoms was not remarkable. There seemed to be a slight tendency toward constipation, which was marked in two instances. There was generally an improved appetite after the first week of treatment. There was no definite effect on abdominal pain or other discomfort. An insufficient number of patients with intestinal tuberculosis has been followed to warrant a statement on the effect of the hormone in this condition.

Hemoptysis.—In the objective findings, the outstanding clinical observation was the control of pulmonary hemorrhage. It is fully realized that rest in bed and sedatives in the majority of instances control hemoptysis, but there are many patients who do not satisfactorily respond to this form of treatment, and if there is response it is tedious and unreliable. Repeated hemorrhages are common, and there are often long periods of blood spitting. It was the latter group (twenty-four patients), with a history of frequent hemoptysis unrelieved permanently by the usual measures, that was selected for this study. It was the plan in the early work to give sufficient parathyroid hormone to maintain a high blood calcium, but this was modified when it was noted that hemoptysis recurred in three patients, although an elevated calcium level was maintained. In the subsequent treatment of pulmonary hemorrhage less hormone has been used with more satisfactory results. There have been nineteen patients without recurrence in two months. In general, patients with marked hemorrhage have been given from 30 to 40 units of parathyroid hormone in two divided doses during a period of thirty-six hours. This dosage was then followed by injections of 10 units of the hormone every second day for two or three weeks. In the patients with only moderate blood spitting, 10 units of the hormone has been given every third day for five or six doses, when the administration was further reduced. It has been felt that if parathyroid hormone, used according to this plan, does not control pulmonary hemorrhage, it is futile to increase the dosage because the results would probably be unsatisfactory. At present we regard the undesirable patients for treatment as those with hemorrhage due to bronchiectasis and pulmonary abscess, and those with very frank hemorrhage conceivably due to large vessel erosions.

Laryngeal Tuberculosis.—The favorable effect of parathyroid hormone in tuberculous laryngitis was much less constant than the effect on pulmonary hemorrhage. It was noted, however, by Dr. R. M. Lukens that in five patients there was a reduction of the edema and swelling of the arytenoids and glottis during treatment. In one instance there was striking evidence of improvement in the lesion. Dryness of the throat often occurred when a large dosage of the hormone was given. This caused not only a marked aggravation of the local symptoms, but also further changes in the laryngeal structures, apparently because of the increased irritation and cough which the dryness provoked. These changes were usually promptly relieved after discontinuing treatment or reducing the dosage of hormone.

Pleural and Pulmonary Râles.—Five patients with acute pleuritic pain were studied after the injection of parathyroid hormone, and three showed marked decrease of the friction sounds within a few hours after the administration of 15 units of hormone. There was also a striking decrease in the pulmonary râles which occurred during superimposed respiratory infec-

tions. It was noticed also in several patients that râles occurring in active tuberculous processes lessened during treatment.

Blood Pressure, Temperature and Pulse Rate, and Weight.—The blood pressure (hypotension is commonly found in tuberculous patients) was unaffected by the parathyroid hormone injections. The temperature and pulse have varied apparently only with the activity of the disease. After a period of high and frequent dosage, it was not uncommon for the temperature to show marked evening elevations often accompanied by chills. It cannot be certain that these periods of activity would not have occurred without medication; nevertheless, they were present so often during high dosage of hormone as to suggest that the extract was at least playing a part in the phenomenon. This reaction also occurred in the far advanced cases under comparatively small dosage and has always been the signal to reduce the amount of hormone. At present there seems to be no direct stimulating effect of the hormone on the mechanisms that control the temperature and pulse, but it is possible that the tuberculous process may be affected, which in turn affects the temperature and pulse rate. The gain in weight has varied with the general condition of the patient.

LABORATORY FINDINGS

The routine laboratory procedures have shown in most instances a typical rise in the blood calcium following the injection of from 10 to 20 units of parathyroid hormone. This rise has usually occurred within twelve hours after administration and has shown an increase of 2 or 3 mg. of calcium above the normal level of from 9 to 11 mg. per hundred cubic centimeters of blood. In most patients, it has been possible to maintain a calcium level of between 12 and 14 mg. per hundred cubic centimeters of blood during the daily injection of from 10 to 20 units of hormone. There have been a few instances of irregular response. In two patients a lowered calcium level persisted for several days during the first administration of hormone before an elevation occurred. In other instances there was a transient fall lasting for a few hours after the first administration before a sharp rise in the calcium level to above normal occurred. A transient reduction in the clotting time of the blood (from one to three minutes) has been noted in a few patients during a period when the calcium was first elevated to from 12 to 14 mg. per hundred cubic centimeters of blood. No striking change in the clotting time has been observed when a small dosage of parathyroid hormone has been used.

ROENTGEN-RAY OBSERVATIONS

Roentgenograms made by Dr. J. T. Farrell, Jr., have been essentially negative so far as calcification is concerned. There have been no areas of increased density in the lung fields which can be attributed to a calcifying effect of parathyroid hormone. A number of the patients showed a clearing of the lung fields which seemed to be more rapid than would ordinarily be expected from the usual treatment. However, there were other patients who showed just as striking change in the reverse order. For the present the roentgen-ray observations have not been striking, except for the absence of calcification in patients given hormone daily for a period of three months and in other patients given less intensive treatment for over four months.

COMMENT

In considering the possible value and harmfulness of parathyroid hormone in tuberculosis, it is to be emphasized that the findings are only suggestive. The uncertain nature of the disease requires caution in drawing hasty conclusions. Furthermore, there is no final evidence at this time to justify a single claim for a specific curative effect. The evidence is largely clinical, and therefore must be considered with extreme and careful criticism. It appears that the hormone has a favorable action on certain signs and symptoms, notably cough, dyspnea, hemoptysis, pleurisy and pulmonary congestion. The mechanism for these phenomena is uncertain. It is not unlikely that the improvement is influenced by some change in the utilization of calcium, the result at first being due to a simple dehydration which removes or lessens exudation. This possibility is suggested particularly in the observations on pleurisy and pulmonary congestion in which the râles are reduced during therapy. The reduced clotting time of the blood may have some influence in the control of pulmonary hemorrhage. There may also be an effect of calcium on the plasma membrane or in the blood lymph vessels which results in lessened permeability. Such possibilities are not merely speculative; they are suggested largely through the action attributed to calcium[4] and the knowledge that this important salt is necessary for certain chemical and physiologic activities in the body. The presence of a parathyroid dysfunction in tuberculosis is unproved, but this gland undoubtedly exerts some influence on calcium metabolism. This influence is true also of an active parathyroid hormone. The danger and possible failure in such therapy appears at the onset to be in overdosage by causing an excessive elimination, the formation of certain chemical products, or the disturbance in equilibrium of important mineral salts. A recent editorial in THE JOURNAL[5] calls attention to the possibilities or harm that may be produced by parathyroid hormone. THE JOURNAL refers to the work of Greenwald and Gross,[6] who have demonstrated the behavior of certain salts, particularly their increased excretion, following the use of this hormone. It is a timely warning that a preparation so potent should be used with discrimination. Furthermore, aside from the possible danger from this hormone, there may be a failure to obtain certain favorable effects by overdosage. This failure is emphasized in the treatment of pulmonary hemorrhage in which hemoptysis is controlled during the first hours of therapy, but returns if large dosage of the hormone is continued, although an increased blood calcium level has been maintained. There are no data at this time to suggest that the utilization of calcium depends on an increased amount of calcium in the circulating blood. There is furthermore no suggestion in the roentgen-ray observations to show that calcification depends wholly on an elevated blood calcium. These observations at least favor the impression that overdosage is useless if not actually harmful —harmful, because the normal storage of calcium in the body may be depleted, and areas of disease undergoing repair may also be so affected.

4. Sollmann, Torald: A Manual of Pharmacology, Philadelphia, W. B. Saunders Company, 1920, p. 683.

5. The Parathyroid Hormone—a Warning, editorial, J. A. M. A. **86**: 351 (Jan. 30) 1926.

6. Greenwald, Isadore; and Gross, Joseph: The Effect of the Administration of a Potent Parathyroid Extract on the Excretion of Nitrogen, Phosphorus, Calcium and Magnesium, with Some Remarks on the Solubility of Calcium Phosphate in Serum and in the Pathogenesis of Tetany, J. Biol. Chem. **66**: 217 (Nov.) 1925.

A detailed consideration of the prolonged use of parathyroid hormone in tuberculosis is not within the scope of this report, because an insufficient number of patients have been observed for a long period of time. At present, however, it seems that the dosage should be governed largely by the signs and symptoms and the type and extent of the disease. It is obvious for various reasons not to expect a favorable effect in the chronic or actively progressive forms undergoing caseation and cavity formation, except possibly to relieve certain complications. There appears to be a more suitable use in those patients with so-called exudative processes and hemorrhage, pleurisy and associated pulmonary infections. In the selected patients without special features, the most constant improvement has been noted during the administration of from 5 to 15 units of hormone once or twice weekly. This dosage has been supplemented by additional hormone in the treatment of special symptoms or complications. The study has emphasized the importance of noting daily changes in the patient's condition not only because of relief that may be obtained in complications, but also for the prevention of ill effects, especially increased coughing in certain types, dryness of the throat, fever and elevated pulse rate which may occur during overdosage. Care should always be used to prevent overdosage.

SUMMARY

1. To a series of sixty tuberculous patients, parathyroid hormone injections were given to determine the effect on certain signs and symptoms common to this disease.

2. There was improvement in the strength, increased warmth, and lessened muscular and pleuritic pain. In some instances, there was also a favorable effect on laryngeal tuberculosis.

3. The effect on cough was variable; the dry hacking cough was often aggravated; the productive coughs were often less troublesome during treatment, and there was decreased expectoration. There was a favorable effect on dyspnea.

4. The most striking objective feature was in the control of pulmonary hemorrhage. This was relieved quite constantly, according to a plan of treatment outlined. There was also a decrease in the edema of the arytenoids and other structures involved in laryngeal tuberculosis, with some evidence of healing. In pleurisy and pulmonary congestion there was evidence of decreased râles following the administration of the parathyroid hormone.

5. In the roentgen-ray examination, there was a suggestive clearing of the lung fields, but no evidence of calcification.

6. In general there was a favorable effect on the condition of the patients, as shown by increase of appetite, gain in weight, and lowered temperature and pulse rate.

7. The untoward features were arthritic pains, dryness of the throat, increased coughing, palpitation, weakness, and periods of elevated temperature and pulse with loss of weight and appetite, and were usually due to overdosage. These phenomena were generally relieved following the withdrawal of the medication, and seldom reappeared during moderate dosage.

8. There appears to be no evidence that a favorable effect on pulmonary tuberculosis is obtained from maintaining a high calcium content in the circulating blood.

1832 Spruce Street.

THE FEMALE SEX HORMONE

IV. ITS OCCURRENCE IN THE CIRCULATING AND MENSTRUAL BLOOD OF THE HUMAN FEMALE: PRELIMINARY REPORT *

ROBERT T. FRANK, M.D.
AND
M. A. GOLDBERGER, M.D.
NEW YORK

Independently, and almost simultaneously, Loewe [1] and one of us, together with collaborators [2] demonstrated the presence of the female sex hormone in the circulating blood. This observation is the first demonstration by means of a specific and direct test of the presence of a true hormone in the circulation.

The test employed is the change from leukocytes to squamous epithelium noted in the vaginal smear of castrated rats and mice.[3]

In this short preliminary report, no retails as to method and technic will be given.

We have obtained the female sex hormone from the blood specimens by means of lipoid extraction performed under identical conditions by identical methods. The results are sufficiently concordant to be considered quantitative. Blood has been obtained from thirty-eight patients. In some instances, specimens have been taken at intervals of from five to seven days through two monthly cycles from the same patient.

From our investigation it has become evident that:

1. The amount of female sex hormone found in the circulating blood of the human female varies during the menstrual cycle. An abrupt increase takes place beginning between the tenth to the fifteenth day counted from the first day of the last menstruation.

2. The female sex hormone is present in greatest concentration in the circulating blood near the first day of menstruation.

3. With the onset of menstruation, the female sex hormone abruptly diminishes in the general circulation.

4. The female sex hormone appears in the menstrual blood, there being present in from triple to six fold the concentration found in the circulating blood.

5. In certain types of menorrhagia and metrorrhagia, the female sex hormone may be (*a*) absent from both the circulating and the uterine blood; (*b*) in others, present in both the circulating and the uterine blood.

6. In certain amenorrheas, an increase in amount of the female sex hormone may be demonstrated in the circulating blood.

From these observations we feel justified in concluding that:

(*a*) The female sex hormone secreted by the maturing follicle reaches the general circulation.

(*b*) The sudden increase of female sex hormone found from ten to fifteen days after the last menstruation may be used approximately to determine the time of ovulation.

(*c*) The female sex hormone secreted by the corpus luteum likewise reaches the general circulation, continuing the pregravid stimulation of the genital tract

* From the Pathological Laboratory and Gynecological Service of Mount Sinai Hospital.

1. Loewe, S.: Klin. Wchnschr. **4**: 1407 (July 16) 1925.
2. Frank, R. T.; Frank, M. L.; Gustavson, R. G., and Weyerts, W. W.: Demonstration of the Female Sex Hormone in the Circulating Blood, I, Preliminary Report, J. A. M. A. **85**: 510 (Aug. 15) 1925.
3. Stockard, C. R., and Papanicolaou, G. N.: The Existence of a Typical Oestrous Cycle in the Guinea-Pig, with a Study of Its Histological and Physiological Changes, Am. J. Anat. **22**: 225 (Sept.) 1917.

and breasts as demonstrated by other methods in a previous communication.[4]

(*d*) During the pregravid stage, either (1) a concentration and storage of the female sex hormone takes place in the uterine tissues, or (2) the uterine mucosa at the time of the menses filters out the female sex hormone from the circulating blood.

(*e*) Two types of menorrhagia or metrorrhagia occur, the one with oversecretion, the other with undersecretion of the female sex hormone. Further study may enable us to elaborate proper forms of treatment based on the etiology.

(*f*) Some amenorrheas may be due to persistence of the corpus luteum, as evidenced by a persistence and undue concentration of the female sex hormone in the circulating blood.

These studies are being continued and elaborated with every prospect of affording valuable aid in both diagnosis and therapy.

10 East Eighty-Fifth Street—206 West Eighty-Sixth Street.

Clinical Notes, Suggestions and New Instruments

A CASE OF MALTA FEVER *

HENRY S. ACKEN, JR., M.D., BROOKLYN

R. G., a minister, aged 39, admitted to the service of Dr. Kandt, Nov. 30, 1925, complaining of headache over the eyes and soreness of the abdomen of five weeks duration, had been treated at his home in New York State during the previous five weeks. The family and past histories were negative. The illness really began about the first of September, 1925, when the patient began to have a feeling of persistent fatigue and weakness. November 4, he had his first known rise of temperature to 101. This dropped during the following week but rose again on the 9th to 102, when he had a chill and profuse sweat, together with persistent headache and abdominal soreness. A tentative diagnosis of typhoid was made by his family physician, but the Widal test was returned as negative. By November 16, the temperature had reached normal, but a week later the patient was forced to go to bed on account of extreme weakness. November 27, the temperature rose to 103, and he complained of weakness, profuse sweat and chills. He entered the hospital three days later; his temperature on admission was 103.

The patient was large and well proportioned, with no abnormal physical signs except a temperature of 103, flushed face and generalized abdominal tenderness. The spleen was not felt. The systolic blood pressure was 120; diastolic, 78. The blood picture was remarkable only in that the leukocyte count was 8,600, with 60 per cent polymorphonuclear cells and 40 per cent mononuclears. A blood count had been taken at home, November 14, which had shown a leukocyte count of 7,600 with 37 per cent polymorphonuclears, and 59 per cent small and 3 per cent large mononuclear cells. The Wassermann and Widal reactions, stool culture, malarial smear, and roentgenograms of the teeth were all negative; the blood culture was sterile and the urine normal.

During the patient's residence at the hospital, the pulse was never above 108 and respiration never above 25. The temperature came down gradually, reaching normal after six days. Nothing remarkable was noted in the convalescence. December 11, the patient was discharged without diagnosis. His temperature had then been normal for about a week. After his return home he still felt weak and his "nerves were shattered." December 16, his temperature rose to 99 and December 18, it was 103.

The patient was readmitted to the hospital on this date, and the physical findings were as before. The blood picture, however, showed a leukocyte count of 7,000, with 26 per cent polymorphonuclears, and 4 per cent large and 70 per cent small mononuclear cells. It was on this second admission that a tentative diagnosis of Malta fever was made, and the search was started for the organism in the blood stream, but was negative. Jan. 5, 1926, a culture of *Micrococcus melitensis* was obtained through the courtesy of Dr. Chester Keefer of Johns Hopkins Hospital. Prior to this, however, cystoscopy and roentgenograms of the chest and sinuses had all proved negative.

The course was similar to that of the previous admission, and the patient became afebrile after nine days, December 25. However, January 5, an agglutination test was done by Dr. Smith, using the culture of *M. melitensis* and the technic as described by Dr. Keefer. This showed a positive agglutination in dilution of 1 : 800, while a control serum was entirely negative. Subsequent study of the blood picture showed a gradual increase in the polymorphonuclear count and a decrease in the small mononuclear count, with a practically constant leukocyte count; the blood picture became normal, January 3, The patient was discharged, January 10, slightly weak and nervous, after about seventeen afebrile days. He has remained well since.

SUMMARY

Three known periods of pyrexia (up to 103), characterized by headache, abdominal soreness, weakness, chills and sweats and no joint pains occurred in this patient. The physical findings were negative. The spleen was never palpable. There was a lymphocytosis, with the blood picture gradually returning to normal. Positive agglutination with *M. melitensis* and the closely related *B. abortus* was obtained. Recovery was spontaneous without specific treatment.

CONCLUSION

It may be said that while Malta fever is thought to be restricted to the island which gives it its name and to southern Europe, several cases have been reported that show it to be endemic in the United States. It should be considered and eliminated as a possibility in obscure fevers.

Seventh Avenue and Sixth Street.

4. Frank, R. T., and Gustavson, R. G.: The Female Sex Hormone and the Gestational Gland, J. A. M. A. **84**: 1715-1719 (June 6) 1925.

* From the Medical Service of the Methodist Episcopal Hospital.

INDUSTRIAL POISONING FROM LOW CONCENTRATIONS OF CHLORINE GAS *

CAREY P. MCCORD, M.D., CINCINNATI

The recent advocacy of chlorine in the treatment of respiratory infections has tended to create the belief that industrial poisoning from low concentrations of this gas is improbable. The concentration of chlorine recommended for therapeutic purposes approximates 0.015 mg. per liter of air. This concentration is fairly close to that present in the bleach rooms in paper mills, laundries and textile mills. Barring accidents, it is believed that chlorine concentrations in such industries range downward from 0.03 mg. per liter of air. Apart from minor inconveniences, such low concentrations will not produce any acute harmful effects. When, however, exposure is continued over a period of years, an occasional worker may be expected to become severely harmed. Such an instance is cited below.

REPORT OF CASE

History.—L. R., white laborer, began employment in a paper mill in 1920. His work, family and personal history up to that time were without significance. At his place of work it was a trades practice to place many-colored, waste paper stock into tanks, together with a solution of commercial "bleach powder" for the purpose of whitening this paper stock. The bleach powder contained about 35 per cent available chlorine. After the bleach treatment the excess fluid was drained off, and the treated stock was dumped from the tanks into a cellar room. The patient's occupation consisted of digging out this paper stock from the drainer room, loading it on hand trucks and transporting it to another room. According to the patient,

* From the Industrial Health Conservancy Laboratories.

an odor of chlorine was present at all times but at certain times appeared to be more concentrated. He knew of no accident that led to gross exposure to chlorine.

In 1924, he first noticed a slight cough, associated with sneezing and burning in the eyes. During this period, there were intervals of a week or two in which he noticed no discomfort. Then the coughing would return for a period of several days. Progressively, the coughing became more severe.

By February, 1925, the condition had become severe, and pain was continuously present in the upper portions of both lungs, but particularly in the right. A bronchitis had developed. During this month and the spring months, the patient consulted his family physician on several occasions. A diagnosis was made of pharyngitis and laryngitis. Although extensive treatment was carried out, no betterment took place. The physician advised discontinuance of work in chlorine. This was not done.

The condition of the patient remained about the same until August, 1925, when it became worse. At that time the patient was dyspneic; he had a feeling of oppression in his chest; the pain in the lungs had increased and the coughing and bronchitis were marked. During September, 1925, he was forced to discontinue work and go to bed. His chief complaints at that time were incessant coughing, severe pain in the chest, sore throat, spitting up blood and the feeling of "a belt around the chest." He was confined to the bed or the room for five weeks. November 9, he attempted some work that did not involve exposure. He has not been able to resume full work up to this time. March 11, 1926, he was referred to us because of shortness of breath, bronchitis, and inability to work. When he entered the room it was obvious that he was dyspneic, undernourished, and suffering from almost continuous coughing

Examination.—The pupils were equal, reacting promptly to light and in accommodation. Ophthalmoscopic examination showed the arteries not contracted, the veins not particularly dilated, and no retinitis or hemorrhages. The teeth were in only fair condition; with marked caries. The gums were retracted from the base of the teeth and the whole picture was one of erosion. The voice was markedly husky. The posterior pharynx and tonsils were clean. The epiglottis was normal and the piriform fossae were clean. The arytenoids and the intra-arytenoid area were red and the membrane thickened, but there was no ulceration. No paralysis of the cords was seen but there was some thickening, without deposits or ulcerations.

The thyroid was just palpable. It is noteworthy that the superficial veins over the thyroid were all distinctly enlarged.

Heart: R. C. D. 3.2 x 9.5 cm. The point of maximum impulse was visible and palpable in the fifth space, 9 cm. to the left. R. S. D. 6 cm. There was no dilatation of the aorta. The first sound was slightly reduplicated at the apex, but there was no definite murmur. At the base the second aortic sound was slightly louder than the second pulmonic, but it was not ringing. The cardiac rate was 100. There was no deficit. The vessel walls were not thickened. The pulse was not of high tension. The systolic blood pressure was 132; diastolic, 80.

Over the upper left lung the note was definitely hyperresonant. It was slightly exaggerated even on the upper right side but not as marked as on the left side. Posteriorly the note was hyperresonant on the right side, especially at the base, and continued clear to the twelfth dorsal spine. Respiratory motility was markedly diminished, not extending more than 1.5 cm. on either side. On auscultation the breath sounds in places were harsh, especially on expiration, but at the bases the sounds were distant. There were occasional dry râles, the picture being that of a low grade bronchitis with emphysema. There were rather more râles anteriorly, especially toward the base, but they were dry. The speaking voice was not changed. The whispering voice was much diminished. At the base posteriorly the whispering voice did not come through. The superficial vessels along the costal margin were distinctly injected, running around the axilla on either side. The liver edge was felt three finger breadths below the costal margin, but the liver dulness above did not begin until below the sixth rib.

Roentgen-ray examination showed an old tuberculosis of the upper right lung, with fibrosis in the upper left lung. There was an old healed cavity in the upper right lung. Marked emphysema of both lower lobes was present. The intracostal spaces were increased, and the density of the lung tissue was definitely diminished throughout the lower lobe of both lungs.

We accept this patient's condition as an occupational disease due to prolonged exposure to low concentrations of chlorine gas arising from work processes.

34 West Seventh Street.

CASE OF LEAD POISONING WITH ONSET SIMULATING TRIGEMINAL NEURALGIA *

LEE FOSHAY, M.D., CLEVELAND

Fellow in Medicine, Lakeside Hospital and Western Reserve University School of Medicine

This case is reported because it presented a difficult problem in diagnosis and because the character and sequence of symptoms are considered sufficiently rare to arouse interest.

A Croatian, aged 44, occupied as a general laborer in a nearby shipyard, came to the dispensary, Jan. 13, 1925, for relief from excruciating pains, of three weeks' duration, in the right side of the face. He had been perfectly well until Christmas Day, 1924, when suddenly he experienced in the right side of the face a severe, burning pain. He described this as a "hot, jumping toothache in every tooth in the right side." It lasted all day, with severe acute exacerbations, and was so severe at night that he was unable to sleep. During the night he noticed that he began to have intermittent pains in the right arm, originating in the shoulder and radiating down the posterolateral aspect of the arm as far as the elbow. These pains were not as severe as those in the face. The pains in both regions continued similarly for three weeks. During this interval the patient, thinking it was all due to his teeth, went to the dentist, who had recently filled a few small cavities. One upper molar was considered to be suspicious and was extracted. As this produced no relief, the patient was referred to the hospital.

He said that he did not have any contact with lead but that he did painting jobs at irregular intervals, the last job more than two months before the onset. There had been no injuries or periods of exposure to cold, and no recent infections could be recalled. No additional useful information could be obtained.

The temperature and pulse were normal. Critical examination of the head failed to reveal any source of pain. The skin, eyes and ears were normal. The teeth were clean and in excellent condition. The first upper right molar was missing. There was no lead line, no pus in the nose, and no tenderness over the sinuses. The tonsils appeared normal. Two points of tenderness were found, one just anterior to the right tragus and another over the site of the upper right third molar tooth. Slight tapping of any of the teeth in either jaw on the right side caused severe pain. There was exquisite tenderness over the upper third of the right humerus, especially over the course of the musculospiral nerve. There was no atrophy of the face or arm muscles; no loss of power; no gross sensory changes to light touch, pressure, heat, cold, pain, vibratory or tactile discrimination tests, although there seemed to be some vague quantitative difference between the two sides, and no tenderness over the brachial plexus.

Roentgenograms of the teeth and of the region of the right shoulder joint were normal.

The hemoglobin was 90 per cent (Tallqvist).

The specific gravity of the urine was 1.004; there was no albumin, sugar or sediment.

The patient was given codeine sulphate, 0.015 Gm., acetphenetidin, 0.13 Gm., and acetylsalicylic acid, 0.33 Gm., in capsules, every four hours, for the pain and told to report in one week.

January 20, one week later, the condition was much the same. He still spent a large part of every night walking

* From the Department of Medicine of Lakeside Hospital and Western Reserve University School of Medicine.

the floor. Examination showed slight atrophy of the extensor muscles of the right forearm, with preservation of the supinator longus. No loss of power could be detected. There was no apparent atrophy of the right masseter. The character of the atrophy of the right forearm suggested lead neuritis, and the diagnosis was made tentatively in spite of the negative history.

Blood smears were made and stained at once. These showed large numbers of cells containing the characteristic stippling. In a thin blood film they averaged 4 to 5 to each oil immersion lens field. Almost all the red blood cells showed a moderate achromia of the central area.

A few more pointed questions to the patient brought out the fact that although he had not been painting he had been mixing large amounts of lead paint for other men, using both white and red lead oxides almost daily for the past eight months. He said that he did not know that the pigments were made of lead and had taken no precautions to prevent inhalation of the dust.

The gums still showed no lead line. Although the urine was not analyzed for lead, the true history, the evidence for secondary anemia, the findings of large numbers of stippled cells and the character of the muscular atrophy were considered sufficient to establish the diagnosis of lead poisoning. The patient was instructed to take potassium iodide, 5 grains (0.3 Gm.), twice a day and put at rest for a month.

During the latter part of January he reported having had abdominal cramps on several different days and noted that constipation had gradually come on.

February 4, he was examined in the clinic by Dr. Charles F. Hoover, who noted atrophy of the extensors of the right forearm, with preservation of the supinator longus; slight atrophy of the triceps, supraspinatus and latissimus dorsi on the right side; no involvement of the rhomboids, serrati, deltoids and sternocleidomastoids; slight protrusion of the tongue to the right and fine fibrillary twitchings; teeth and gums clean; no lead line; some subjective qualitative difference in tactile perception between the two sides of the face.

By the middle of February the patient had had pain in the left arm and forearm with atrophy of the abductor indicis of the left hand. The atrophy of the right forearm and hand had increased, but there was no atrophy of the masseters. By the middle of March there was both palpable and visible atrophy of the right masseter. The strength of the right hand and arm was markedly reduced, and there was slight impairment on the left side. There had been no pain for almost a month.

Nov. 24, 1925, there were no neuritic pains, and no colic. The strength of both forearms and of both hands was still subnormal. There was persistent weakness of the extensors of the wrists and fingers, greater in the right side. The right masseter was still smaller than the left. The atrophy of the muscles of the forearms was much less than at the time of the previous visit. It was bilaterally equal and would not readily be noticed. The patient had worked steadily since the first of April and had been comfortable.

In February, 1926, fourteen months after the onset, the patient reported himself perfectly well. He had worked steadily for eleven months and was entirely free from symptoms.

COMMENT

The location of the pain, the patient's description of its character, the homolateral radiation to the arm and the Valleix points of hypersensitivity seemed at first to indicate a diagnosis of tic douloureux of the neuritic type. The entire absence of premonitory symptoms, of vasomotor, secretory and trophic disturbances, and the absence of a tic or other motor phenomena seemed to render such a consideration improbable, but it was not until the characteristic atrophy of the arm appeared that the diagnosis of trigeminal neuralgia finally could be abandoned.

In the literature on lead poisoning there are several reports of cranial nerve palsies due to lead. All of these have been painless pareses or paralyses. I have not been able to find any reference to lead neuritis involving the trigeminal nerve, of either the motor or the sensory divisions.

PECULIAR COMPLICATION OF APPENDICITIS

RICHARD TERRELL DAVIS, M.D., WARSAW, VA.

In clean appendectomies, a routine investigation of subjacent tissues is strongly urged as the part of wisdom. The following is a case in point:

R. M., a youth, aged 16, whose previous health had been good, was taken suddenly ill early in the morning of Aug. 7, 1925. He evinced severe pain in the abdomen, centering at the umbilicus, together with constant nausea. He attributed his symptoms to having eaten largely of watermelon the evening before. I saw him for the first time at 10:30. His expression was anxious; the abdomen was normal in contour but with some rigidity of both rectus muscles. He complained of pain in the umbilical region, and of tenderness on deep pressure at McBurney's point. He experienced almost equal tenderness slightly above the umbilicus. The temperature was 99.8; pulse, 94; respiration, 22. The heart was normal. The urine had some albumin and a few hyaline and granular casts. The total leukocyte count was 14,000; polymorphonuclears, 93 per cent. The patient was hurried to the hospital, where I operated on him at 2 p. m. A right rectus incision was made and I found a very long, somewhat swollen appendix with a few adhesions, and engorgement of the adjacent mesenteric vessels. The appendix was removed in the usual way.

Its condition, however, did not seem to me sufficiently involved to account for the severity of the patient's symptoms, so I investigated further. At a distance of about 30 cm. from the ileocecal valve, I found on the ileum a Meckel's diverticulum. This diverticulum was 5 cm. long, and 1.8 cm. broad at its base, with a wooden toothpick lying in it parallel to its long axis and perforating its apex; 1.2 cm. of the toothpick extended outside the perforation and impinged on an adjacent coil of intestine, through the serous and muscular coats of which it had cut. I removed the diverticulum with the toothpick in situ, repaired the injury to the adjacent intestine, poured 60 cc. of 0.5 per cent solution of merurochrome-220 soluble into the abdominal cavity, and put in a cigaret drain, which was removed the next day. The patient made an uneventful recovery and left the hospital in eight days.

COMPLETE COURSE OF EVENTS IN FRACTURE OF THE BASE OF THE CRANIUM *

E. L. HANSON, M.D., LOUISVILLE, KY.

This case beautifully illustrates the basal syndrome. Within forty-five minutes of admission into the hospital, the patient passed through the complete classic sequence of events for basal fracture.

E. R., a white man, aged 22, well developed and well nourished, was admitted to the hospital as an emergency patient, Jan. 3, 1926, suffering from a scalp laceration above the right ear, sustained as a result of being struck by a street car. On examination, a hemorrhage from the right ear into the nasopharynx was found. The patient was semiconscious; there was emesis of the sanguineous gastric contents; the pulse was 85, respiration 24, but not stertorous, and the pupils in midcontraction, responding well to light. The blood pressure was 130 systolic and 70 diastolic, and there was no motor paralysis present. A lumbar puncture revealed hemorrhagic spinal fluid under moderately elevated pressure.

Within twenty minutes of admission and almost immediately following the lumbar puncture, the patient lapsed into deep coma, from which it was impossible to arouse him; the pulse slowed to 60, respiration became deep and stertorous, the right pupil became dilated and fixed, and the blood pressure was 155 systolic and 25 diastolic.

Ten minutes later the patient developed cyanosis, which gradually deepened; the pulse was only 50; respirations slowed until they assumed the Cheyne-Stokes type, the right pupil remained fixed, while the left was now in middilatation, following in sequence the course of the right; the pulse began

* From the division of surgery, Louisville City Hospital, affiliated with the University of Louisville Medical Department.

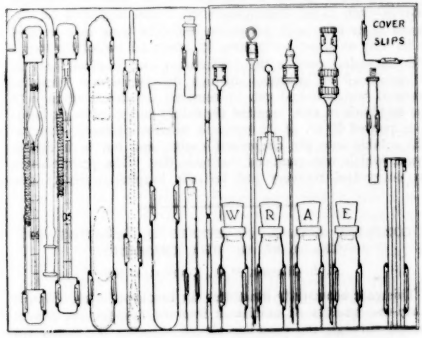
to quicken and a spinal puncture showed almost undiluted blood under excessive pressure. A transient spastic left hemiplegia was observed, followed shortly by a spastic diplegia. The respiration at this time consisted of long periods of apnea followed by irregular gasping, during which the patient was completely cyanosed. The pulse became increasingly rapid, passing 160 at one time, after which it became irregular but persisted for five minutes after respiration had entirely ceased. From the time of the second lumbar puncture, the needle was kept intact for continuous drainage, and the head of the bed left radically elevated.

A USEFUL DIAGNOSTIC AID CASE

HARRY D. PIERCY, M.D., CLEVELAND

This pocket case contains a number of clinical diagnostic aids that are often required in an emergency and are not as a rule carried in the physician's bag. The delay and inconvenience caused when I have been compelled to return to the office for some of these articles led me to design and make this compact case, which fits into my bag and is always at hand when needed. Its convenience and usefulness has been demonstrated many times, and I feel that it merits this description.

The case, of German silver, is hinged on one side and opens into two halves. It measures 10 by 15 by 3 cm. and weighs, with its contents, about 425 Gm. It contains the



Diagnostic aid case.

pipets for making blood counts; glass cover slips for blood smears; glass slides for blood or pus smears; a blood agar slant with sterile swab; a sterile test tube for blood or other fluid; hypodermic vials, containing, in one, calcium oxylate, and, in the other, sealed capillary tubes for formaldehyde; four 8 cc. glass vials containing, respectively, diluting fluid for white and for red cells, alcohol and ether; several needles for venipuncture and lumbar puncture, and a blood lancet.

The cover slips are contained in the small square box seen in the upper right hand corner. The culture tube here illustrated, made by the Digestive Ferments Company of Detroit, happens to be just the proper size to fit into this case. The spring clips securely sealing the ends of the blood pipets are of obviously simple construction and should be obtainable from any supply house. The articles are securely held in place by nickel plated spring clips of phosphor bronze, soldered to the top and bottom of the case.

8314 Euclid Avenue.

Mitral Stenosis in Women.—The occurrence of "pure mitral stenosis" in women who give no history of any illness prior to the development of cardiac symptoms has always been a puzzling fact, and remains so today.—Sir Thomas Horder, *Brit. Med. J.*, April 3, 1926.

Special Articles

THE TECHNIC OF MEDICATION

A SERIES OF ARTICLES ON THE METHODS OF PRESCRIBING AND PREPARING, THE INDICATIONS FOR, AND THE USES OF VARIOUS MEDICAMENTS *

BERNARD FANTUS, M.D.
Associate Clinical Professor of Medicine, Rush Medical College
CHICAGO

(Continued from page 1625)

TUBE ADMINISTRATION

STOMACH TUBE ADMINISTRATION

Gavage.—In certain diseases and emergencies, feeding and drug administration by stomach or duodenal tube may become necessary. When, for instance, the patient is unconscious, or for one reason or another unwilling or unable to swallow, food as well as medicine may be placed in the stomach by means of a tube, a procedure known as gavage. Under these circumstances, it is usually easier to pass the tube through the nose than through the mouth. It is less apt to enter the trachea, and the mouth does not have to be pried and kept open by instruments. A tube the diameter of a no. 20 French catheter is employed. For infants, a no. 10 catheter suffices. For adults, the tube should be more than 45 cm. long, as, for example, a duodenal tube; and, if difficulty is encountered in its passage, it may be stiffened for introduction by means of a piano wire, which is withdrawn after the tube has reached the stomach. The tube, well lubricated, is slowly passed through the nostril, the patient's breathing being watched for evidence of embarrassment, coughing or choking. Under no circumstances should fluid be introduced into the tube if a respiratory air current can be heard or felt at the end of the tube. It is wise to withdraw, by means of a syringe, a little of the gastric contents to make certain that the tube has reached the stomach. Lavage may often be practiced at this point with advantage, so as to clear the stomach of stagnating food and mucus.

For the introduction of fluid into the stomach, the barrel of a 15 to 20 cc. glass syringe furnishes a readily available funnel that fits these small tubes. As the procedure is unpleasant and somewhat of a strain to the patient, it should be repeated as infrequently as possible. As a rule it is best not to fill the stomach completely, using from 100 to 300 cc. of fluid. Hence only concentrated food, such as cream and eggs, should be used; and a medicament may be added to this, if required.

Lavage.—Though, by gastric irrigation with water, we can secure almost all the effects that may be required from gastric lavage, or washing of the stomach, there are certain conditions when the addition of a medicament to the irrigating fluid may be of advantage. Thus, in extreme gastrectasia with luxurious development of yeasts or sarcinae, better results can probably be obtained by antiseptic irrigation than by the use of plain water. The best fluid for this purpose is a saturated solution of salicylic acid (about 1 : 500), as it combines a high degree of antisepticity with low

* This is the twenty-second of a series of articles on "The Technic of Medication." When completed the articles will be assembled in book form.

toxicity; and the slight solubility of salicylic acid in water precludes the use of solutions of excessive strength. While warm alkali irrigation (up to 5 per cent sodium bicarbonate) is probably but little superior to the copious use of plain water in hyperchlorhydria, it is of decided advantage in favoring removal of mucus in gastric catarrh. The most rational method of silver nitrate administration in gastric disease is, no doubt, silver nitrate irrigation practiced according to the method of Gumprecht: [54]

After the stomach has been washed out with water, one introduces from 100 to 200 cc. of 1 to 2 per cent solution of silver nitrate (in distilled water) for one or two minutes and then siphons it out. This is to bind gastric chloride. Now from 100 to 250 cc. of this solution is introduced and permitted to remain for two minutes, then withdrawn, and the stomach is washed with warm water until the fluid—at first cloudy with silver chloride—finally returns clear.

DUODENAL TUBE ADMINISTRATION

For the administration of medicaments unsuitable for injection into the tissues, a method has of late become available, with the development of the duodenal tube, that is of use most especially in cases of uncontrollable vomiting and purging. This method was developed chiefly by Max Einhorn, from whose book [55] the following items of technic are freely quoted:

The capsule, as well as the lower part of the rubber tube, is moistened with warm water and put into the pharynx of the patient. Then the latter drinks some water, and the instrument thus soon passes into the stomach. To be certain that the capsule did not get stuck in the esophagus, it is well to have the patient shake his abdomen and to aspirate a syringeful of chyme. This can easily be identified as gastric contents. Now we pass a syringeful of water and then one of air through the instrument. The rubber tube is then clamped off and left alone for about one hour. The patient is told not to close his mouth too tightly, so that the tube is not retarded in its wanderings. The patient must also avoid intentional swallowing of the tube. Through the peristalsis of the stomach the capsule is pushed on farther, and usually passes through the pylorus into the duodenum, and later into the beginning of the small intestine. It is best to have the patient read some light literature, in order to divert his attention. After one hour we examine how far the capsule has progressed; if sign III is near the lips (70 cm.) or inside the mouth, we try to aspirate. If the capsule is in the duodenum, we generally obtain a clear, golden yellow or watery liquid of alkaline reaction and somewhat viscid consistency. If, however, it is in the stomach, we obtain an acid liquid resembling the one first removed. This can, of course, occur if the tube lies in the stomach in a coiled manner. Should the latter be the case, we must partly withdraw the tube, after putting water and air through it, up to the mark II (56 cm.). The tube is then again clamped off, and after from one-half to one hour the procedure is repeated. We generally succeed in nearly all cases (of course, not in such where there is pyloric stenosis) in obtaining duodenal contents. When the tube is to be withdrawn, it is clamped and slowly pulled out. When the beginning of the esophagus is reached, the patient is told to swallow, and during this act the capsule is withdrawn.

The tube, stiffened if required by the temporary introduction of piano wire, may also be passed through the nostril, a useful modification of the technic to be resorted to with unconscious or delirious patients, as the tube can thus be passed with much less trouble and the patient might bite the tube passed through the mouth. Passing the tube through the nose is also to be preferred when it is to remain in the duodenum for days.

If there is doubt whether the capsule is in the stomach or in the duodenum, the following hints may be helpful:

1. If the capsule is in the stomach and we aspirate, the syringe quickly fills with fluid or air, provided the holes are not clogged by coarse food. The heavier rubber tube attached to the syringe does not collapse, as this organ is always filled with either air or liquid. If, however, the capsule is in the duodenum, one finds that the connecting rubber tube will collapse on rapid aspiration. [After waiting a short while and after trying aspiration, slowly, fluid enters the syringe.]

2. If the capsule is in the stomach and air is forced through, the patient feels the entrance of the air very plainly and can localize where it occurred. If the capsule is in the duodenum or jejunum, the patient does not usually feel the entrance of air.

3. *The Milk Test.*—If we give the patient two or three swallows of milk (provided, of course, that no milk has been previously taken), and then aspirate with the capsule in the duodenum, we obtain pure duodenal contents (golden yellow or clear as water) without any admixture of milk. If, however, the capsule is in the stomach, the milk appears at once.

4. The roentgen rays show the position of the capsule in the stomach or duodenum very plainly.

If the tube, after a sojourn of three hours (or—if it had been introduced the night before at retiring—in the early morning), has not reached the duodenum, the patient is instructed to lie half an hour on his right side. Aspiration is then tried; if gastric contents are obtained, the patient is given something to drink and told to walk about for ten or fifteen minutes. If the examination again shows that the tube is in the stomach, an effervescing drink is given. Half an hour later, aspiration is again performed. Should the tube, showing mark III at the lips, still have failed to enter the duodenum, the patient is given 0.5 mg. of atropine sulphate. One hour later another examination is made. If the tube is still in the stomach, an effervescent drink is given again. After waiting a few hours more and still finding the tube in the stomach, an aperient (magnesium sulphate or citrate) may be employed.

When the duodenal tube is used for alimentation, the food is usually given every two hours, eight feedings a day. The standard food is milk (240 cc.), one raw egg, and a tablespoonful or two of lactose. Should the lactose cause diarrhea, it is omitted. Whatever is fed to the patient should be of blood temperature—neither cold nor hot—and it must be given slowly.

After each feeding, before the stopcock is closed, a little water and then some air should be injected, in order to keep the tube always empty. If one is not careful to clean out the tube each time with water and air, the end of the tube is liable to become clogged in a day or two. Then the tube has to be taken out and replaced, with a great deal of inconvenience to the patient, as well as to the physician and nurse; and the tube removed is often found spoiled. While the patient has the tube in, his mouth should frequently be washed out with some good mouth wash. As these patients do not eat anything, there is nothing to cleanse the surface of the tongue, and it is very essential that it should be kept clean.

Duodenal alimentation may be life saving in the vicious circle of vomiting that has produced starvation acidosis, which in turn maintains the vomiting and may render it quite uncontrollable.

54. Gumprecht, F.: Die Technik der speciellen Therapie, Jena, Gustav Fischer, 1903, p. 95.
55. Einhorn, Max: The Duodenal Tube and Its Possibilities, Philadelphia, W. B. Saunders Company, 1920.

In thrombo-angiitis obliterans, good results have been obtained from flooding the organism with large quantities of fluid (9 or 10 quarts [liters] daily). As such large quantities of fluid cannot be taken by the patient with impunity in the ordinary way, it is given best, according to Willy Meyer, by duodenal injection. The patient may be given his meals in the ordinary way by mouth. At the same time, he is given about 9 liters of Ringer's solution daily through the duodenal tube, which in one case was left in situ for a period of about four weeks.

Remedies can be injected into the duodenum for two purposes: (1) to exert a therapeutic influence within the duodenum or intestine, or (2) to act in distant localities after absorption from duodenum or intestine of special remedies whose sojourn in or passage through the stomach does not appear desirable.

Strong silver protein (0.5 per cent solution) or mild silver protein (20 per cent solution) may be instilled into the duodenum in quantities of about 15 or 20 cc., or one may introduce silver nitrate, 100 cc. of the strength of 1:20,000 up to 1:1,000, with good results in chronic duodenitis and cholecystitis or duodenal ulcer. Cathartics or sedatives may be given to patients who have the duodenal tube in place, directly into the duodenum with quicker and prompter action than through the stomach. Vermifuge and endamebicidal remedies have been given transduodenally to avoid their effect on the stomach in irritable conditions of this organ.

(To be continued)

RELIGIOUS HEALING

PRELIMINARY REPORT

ALICE E. PAULSEN, PH.D.
NEW YORK

(Concluded from page 1623)

MODERN MOVEMENTS WITHIN THE CHURCH

CATHOLIC CHURCHES

Healing has always occupied considerable attention in the Roman Catholic church. Many Catholic churches possess relics which are believed to have special healing powers. This may be a piece of bone taken from the body of a saint, as a rule one who is said to have performed miracles of healing during his or her lifetime. The believer may at any time offer prayers to this saint or ask the priest to apply the relic. This is done by touching the afflicted part of the body with the relic (enclosed in a case) and it is believed that healing may thus be accelerated. Some churches hold weekly healing services which are attended by all denominations in great numbers. The particular relics at these churches are believed to have special healing power. It is distinctly understood, however, that the patient should also have medical attention when this should be sought.

Some priests carry a portable relic on their visits to the sick. Many report noticeable improvement following its application. The prayers for the sick offered both at the bedside and in the church are believed to have a direct influence on the patient's welfare, and not infrequently marked improvement occurs after the priest has administered unction.

Another healing ceremony observed in the Catholic church is the novena. This consists of visits to seek help by means of touching a relic once a week for nine consecutive weeks, or daily for nine consecutive days. Following each service the patient is touched with the relic. During the nine weeks or days, he is expected to live an especially devout life and to devote considerable time to meditation and prayer.

Still another and perhaps the most important type of healing in connection with the Roman Catholic church is that accomplished at various shrines. There is, as a rule, some legend connected with the shrine which leads the pilgrim to believe that if he makes a pilgrimage to that particular spot and offers a petition for help, he will be instantaneously healed. The devout Catholic is convinced that these cures, when they occur, as they sometimes do, are miracles accomplished through direct answer to his prayer.

Lourdes in France and St. Anne de Beaupré in Canada are the most famous Catholic shrines. The legend connected with Lourdes is that the Blessed Virgin appeared to a peasant girl in that place and told her that there was a spring in the grotto at her feet which would effect the cure of the physical ills of those who would bathe therein. And it is claimed that what the Virgin said is true. The spring was first established in 1888. From that time on pilgrims have gone to Lourdes in great numbers, figures affirming the number to be about 1,000,000 a year now, some for relief from physical ills, some merely for spiritual uplift, some out of mere curiosity. Though comparatively few are healed, it is estimated that since the discovery of the healing power of this pool of water 4,000 in all have experienced cures. In the chapel at the shrine are crutches and other supports that have been thrown aside by the healed who had no further use for them.

A medical board is maintained at the shrine and every cure is certified by this board. A patient must bring with him from his personal physician documentary evidence of his condition before seeking the cure. It is said that only those patients who bring evidence of having suffered from organic disease are classified as miraculously healed. The *Journal de la grotte* reports each case in detail, and any visiting physician who desires to examine any patient when a cure is reported is privileged to do so.

The procedure at Lourdes is very complex. A long series of preparatory ceremonials and devotions precedes the actual dipping in the pool.

SPECIAL ACTIVITIES IN CHURCHES

Aside from any connection with guilds or organized prayer circles, and the like, many churches have well established health work similar to that in any other field of social service, carried on through medical clinic, visiting nurse, social case worker or other individual agent.

Churches also support convalescent homes, preventoriums and hospitals. They have an interest in various auxiliaries in connection with all sorts of medical work. The Episcopal church, for instance, supports the city mission society, which, among its other activities, has visiting or resident chaplains in forty New York hospitals. Because they are so pressed for time, the work of these men is confined almost entirely to the giving of extreme unction and the services to patients about to undergo surgical operations.

The church has an unusual opportunity to reach a great number of people in its various activities. Few recognize the influence that a large modern church may have in a community. It is estimated that 55,500 people

used the Madison Avenue Presbyterian Church House for social and educational activities during the past year. Moreover, 39,161 attended Sunday school, 475 of the enrolled members of which are over 18 years of age. Besides this, 58,000 persons attended public worship on Sundays. The pews are free, and all are welcome. During the year the ministers and other members of the staff made 9,699 visits among members of the congregation. This is mentioned in passing merely to indicate the possibilities of such an organization as a means of spreading knowledge and influencing behavior.

PROBLEM RECOGNIZED BY IMPORTANT CHURCH AGENCIES

Leaders in theological seminaries are interested in this problem because they must educate ministers in the right attitude toward it. For the most part they have taken no definite stand in the matter because its growth has come on them unaware. In general, as expressed by Professor Elliott of Union Theological Seminary, the theologian is not desirous of making religion a healing movement. He does not wish to take up work which the psychotherapist is better able to handle. On the other hand, he wishes to do his part if called on to do so, and especially does he wish to make religion an integral part of every aspect of life, that its unifying influence may work for the betterment of man at all times and that it may lend support especially in time of distress.

As a central agency, including in its membership many different denominations and churches throughout the country, the Federal Council of Churches is continually called on to give advice or to express opinions with regard to all aspects of church work. With the present interest in healing and comparatively little knowledge of it on which to base reliable opinions, it has become a practical necessity for this body to undertake research with regard to it. One of the problems before its research department at the present moment is the relation of religion and health. It is withholding opinion until such research shall have been completed.

PSYCHOLOGIC FACTORS

As we review the methods employed in the types of religious therapy which I have been considering, we are immediately impressed with the rôle allotted to suggestion.

Each system in some way introduces the idea of cure or health after preparing the mind through one means or another to accept it, and the fundamental principle of each system is the assumption that any idea possessing the mind tends to materialize in the body.

This is, indeed, a fundamental law in suggestion; but, happily or unhappily, there are numerous ways in which this tendency may be neutralized long before it actually does materialize in the body. Inhibitory influences either in the mind or in the body must be taken into account.

Now, counteracting ideas are among the most powerful inhibitors. Recognizing this, the faith healer makes his first step the overcoming of whatever inhibiting ideas may be present in the patient's mind. Not until this is accomplished does he advance the suggestion designed to serve his especial purpose.

His method may be a process by which he builds up a system of ideas through discussion, reading, recitation, meditation, concentration, "treatment" or other method of filling the patient's mind with his particular line of thought. By constant repetition alone these ideas may gain precedence over other ideas which he constantly denies or associates in a negative way with the patient's desire—to get well, to be prosperous, to be happy. The new system soon becomes dynamic. Being linked with the patient's desire and attached by a religious setting to an instinctive mechanism, it readily gains possession of the field. Constant consideration of it establishes the ideas involved, just as any other habit becomes established. As long as the patient keeps in practice, it is quite as difficult for him to change his mental attitude as it would be for him to change a motor habit once firmly established.

Thus, in the case of the trained Christian Scientist and other New Thought students, the suggestion that enters into the treatment falls in especially prepared soil. The critical faculties are as effectively controlled as if the patient were hypnotized. One link in the chain of conditions that may inhibit the materialization of the idea in bodily activity is eliminated. Then, too, there is the matter of physical relaxation and the further concentration of attention involved in the conditions under which treatment is given. Even though the proper apperceptive mass has not been built up, his mind would naturally be less resistive under these conditions of control.

In some cases the descriptions given by patients who have undergone treatment at the hands of certain practitioners closely resemble the description of what Braid terms slight hypnosis. "The subjects become more or less lethargic but are conscious of what takes place and suffer no subsequent loss of memory." In some of Braid's experiments, this group comprised about 90 per cent of those who responded to curative suggestions.

Cramping the attention in one way or another is an effective method of producing hypnosis. While the members of these healing cults volubly deny that their work in any way involves hypnotism, they could not fail to note the resemblance were they aware of the facts in the case. Few recognize that there are all stages of subjectivity in hypnotism, and that a person may become as effectively controlled by an idea that has taken full possession of his mind as he may be by the operator in what he readily recognizes as hypnosis.

And so it is with other forms of "treatment." The Divine healer, for instance, prepares the way for his final suggestion by a preparatory discourse and affirmative prayer. He withholds the delivery of his dynamic suggestion until something conveyed to him through his rapport with the patient tells him that the psychologic moment has arrived. The patient at this time may be experiencing such intense emotion as the result of the implicit faith that has been established in his mind, with its resultant expectancy, that he may be completely incapacitated from exercising his critical faculties. It may be that he is in some other state of subjectivity, probably hypnotic; or, if he has come for the relief of some acute distress, such as extreme pain, his attention may be so completely absorbed by his symptoms that he can offer no resistance to the idea now implanted in his mind by the operator. The principle is the same in all cases. Ideas that may counteract the situation are first controlled, and the patient's suggestibility is then further enhanced by the conditions of the treatment.

A similar situation prevails in cases in which cures are effected through relics or devotions at shrines. The long series of preliminary ceremonies establish expectancy, and the final act is consummated at a moment when emotion is at its height or when the patient is otherwise unable to oppose the suggestion.

But there are certain aspects of the situation, especially in the case of the more elaborately organized systems, not so readily discernible on the surface. To appreciate these, we must consider how his experience or how his attention to a system of ideas influences the subject's affective life.

Conveyed to the patient in one way or another are certain fundamental ideas which become so firmly implanted in his mind that they furnish him with convictions beyond all dispute which have a marked emotional effect. These ideas form the nucleus for the belief that God, an all powerful, all knowing, everywhere present beneficent power, or force, actually exists; that this power exists in a given relationship to the individual; that the establishment of such a relationship is natural and normal; that such a relationship, once established, enables him to commune with this power; that in this communion a contact is formed which results in a flow of energy which can produce effects not otherwise attainable.

It is in spite of the shortcomings of some systems, even of recognized theology or institutionalized religion, that this development of what we may term personal religion may take place. The personality of the individual, his other religious experiences, his mental attitude and his life in general, are undoubtedly deciding factors; but stimulus is supplied by the system or the experience through which the fundamental ideas are introduced.

The more earnest followers of any of the typical religious therapeutic cults are unanimous in their declaration that they have been led to a fuller realization of life, and that when they first fully comprehended the meaning of the idea of God involved in the teaching of their leader, everything changed for them. They speak of having developed on the basis of this an indescribable joy and satisfaction, a sense of security not otherwise attainable, and an ability to face life with unbounded courage. The full import of these ideas may burst on the patient in the form of sudden enlightenment as the result of some vital experience that serves to integrate his previous experience, or it may be built up by a more gradual process. Regardless of how he comes into a full realization of their significance, this realization has a distinct influence on his affective life.

The appeal to the ego is tremendous. What could have a more expansive influence on the personality than to believe, without the slightest shadow of doubt that one is essential to the plans of God himself; that one partakes of the qualities of God? Followed to its logical conclusion with regard to disease, if God is omnipotent and man partakes of his qualities, indeed, if God is in man, disease is a very minor matter and can readily be overcome through this power within. And what could be more comforting than to know beyond the possibility of any doubt that one may turn at will to a higher power with absolute assurance that one will be given strength to meet any difficulty that may arise? Those who have attained this belief actually report a sense of security beyond their ability to account for otherwise, and those who have learned to carry on what they term effective communion with whatever power it may be that they recognize actually do report a restoration and a rejuvenation as a result of this communion.

The attainment of these convictions is reported to add new zest to life, to develop confidence, serenity of mind, cheerfulness, and a preponderance of loving affections toward others. Unfortunately, in some cases the latter is not followed to its logical conclusion, and it is entirely just to say that many of the cults fall short in this respect, appearing entirely selfish in their purpose. But even though optimism and cheerfulness are induced in the patient on a more superficial basis, it serves its purpose by raising his morale and directing his attitude toward the difficulties of life.

Particular mental states inherent in the functioning of the religious instinct may be of especial importance in their influence on physical conditions. Dr. William Brown Wilde, reader in mental philosophy in the University of Oxford, is sponsor for the statement, "We can say as a fact that suggestion produces results; that autosuggestion produces more permanent results, and that if genuine faith is aroused the most astounding results of a permanent nature may be produced."

William James, in discussing prayer, writes: "As regards prayer for the sick, if any medical fact can be considered to stand firm it is that in certain environments prayer may contribute to recovery and should be encouraged as a therapeutic measure." He goes into considerable detail to make clear the nature of the mental process involved in prayer:

> Man can learn to transcend those limitations (of finite thought) and draw wisdom and power at will . . . The divine presence is known through experience. The turning to a higher plane is a distinct act of consciousness. It is not a vague twilight or semiconscious experience. It is not an ecstasy, it is not a trance. It is not superconsciousness in the Vedantic sense. It is not due to self hypnotism. It is a perfectly calm, sane, sound, rational common sense shifting of consciousness from phenomena of sense perception to phenomena of seership, from the thought of self to a distinctly higher realm. . . . For example, if the lower self be nervous, anxious, tense, one can in a few moments compel it to be calm. This is not done by a word simply. Again I say it is not hypnotism. It is by the exercise of power. One feels that spirit of peace as definitely as heat is perceived on a hot summer day. The power can be as surely used as the sun's rays can be focused and made to work, to set fire to wood.

It may well be that religious healing makes use of forces not ordinarily recognized. It remains for us to study the nature of these forces, to determine how far they are present in the normal person, how far they may be applied with sanity, and what method of application is most advantageous.

SCOPE AND EVALUATION OF THE WORK

Now, we may ask, What limits do the advocates of the so-called faith cures place on the possibilities of their work? Except as indicated in the case of the more conservative in the theological field, the answer is, theoretically none. In the absence of proper records, we can judge only by verbal testimony, such records in the form of narrative as one hears on every side and the few attempts that have been made at a systematic study. In the course of this limited survey we have heard and read endless testimony on the part of persons who believe that they have been cured of everything from a pain in the heel to cancer. Unbounded health, wealth and happiness may be secured by those methods, according to some who have tried them. Results may be instantaneous, gradual, complete or partial.

Certain New Thought advertisements reproduced below, give an idea of what New Thought proposes to accomplish:

"Financial Problems Solved Through New Thought"; "Rheumatism, Hay-Fever and Business Difficulties

Overcome"; "How New Thought Helped When My Husband Became a Flirt"; "How Constructive Thinking Helped Heal Tuberculosis"; "Replenishing the Nerve Centers"; "How to Heal Your Body and Pocketbook Through Expanding Consciousness"; "How to Be a Genius"; "Curing Epilepsy in Fifteen Minutes."

The psychologist Henry H. Goddard, Ph.D.,[12] reports one of the most systematic studies that has ever been made on this subject. Goddard included in his study more than 1,600 records of individual cures, mainly taken from the Divine healer Dowie's work. About two thirds of these were females, and they ranged in age from 6 to 86 years. The greatest number ranged from 20 to 50 years, and among women the married were about three times as numerous as the unmarried. Further results of Dr. Goddard's study were as follows:

The duration of the disease from which they were healed varies from a few months to fifty-two years. The average time is about twelve years for each sex. Thirty-three per cent report instantaneous cures, 50 per cent gradual, and 17 per cent reported that they were not yet perfectly healed. It must be noted that while 33 per cent report instantaneous healing, it is clear from their own account that they almost always mean that pain ceased instantly. And it may be mentioned that of all the returns that give data on that point, almost every one shows that pain ceased at the time of prayer.

Again, of the whole number, 76 per cent were treated or prayed with by "Dr." Dowie in person; 7.5 per cent were prayed for by him at a distance; 4.5 per cent were prayed for by Mrs. Dowie; 7.5 per cent were healed in answer to their own prayers or efforts, and 4.5 per cent were healed in answer to prayers of friends.

The number of ailments mentioned in their accounts of themselves varies from one to nine for the males and one to eleven for the females.

The time that had elapsed (at the time the study was made) since the cures varied from a few days to fourteen years. Time required for full recovery may be as much as two months. If longer than that, it seems to be regarded as a failure and is not mentioned.

*Goddard's Classification of Diseases Cured**

	Nervous	Circulatory	Respiratory	Digestive	Contagious	Wounds	Cancer	Rheumatism
Males	20	10	20	15	5	14	5	11
Females	22	14.5	18	16	5	3.5	11.5	9.5

* The figures are in per cents.

Among the remarkable features mentioned may be noted:

Legs lengthened from 1 to 5 inches; "gained 95 pounds"; hip 2½ inches reduced; fifty-six abscesses cured at one time; deaf and dumb; senseless three weeks; "forty whiskies a day" cure; "wreck physically"; hip disease; goiter; three bullets; fever settled in bones; appendicitis; leg shortened 2 inches; born blind.

The following list of troubles, as stated by the patients themselves, is given:

Abscess; accident; ague; appendicitis; ankle sprained; asthma; backache; back weak; bad habits; bilious trouble; blindness; blind from birth; blood poisoning; Bright's disease; bronchitis; bronchial disease; broken arm; burns; burned hands; blood disease; brain fever; cancer; cancer in tongue; cancerous tumor; carbuncle; catarrh; chills; cholera infantum; cholera morbus; congestion of lungs; consumption; constipation; convulsions; cough; chlorosis; compound curvature of the spine; croup; deafness; deaf and dumb; diabetes; diarrhea; diphtheria; dislocated shoulder; dislocated knee; dropsy; dysentery; dyspepsia; diphtheritic paralysis; devil cast out; earache; eczema; epilepsy; erysipelas; eyes, inflammation of; eyes, weak; eyes, sight failing; feebleminded child; fever; fever sores; felon; fistula; gangrene; gambling; goiter; granulated eyelids; gallstones; headache; healed when dying; heart disease; heart broken; heel lame; hay-fever; hydatids; hydrophobia; hemorrhage of lungs; hemorrhage of kidneys; hemorrhoids; hernia; hip broken; hip disease; hip joint renewed; hysteria; imperfect sight; infidelity; impediment in speech; impotent; indigestion; inflammation of bowels; inflammation of stomach; inflammation of lungs; inflammatory rheumatism; internal tumor; ivy poison; internal troubles; intestinal trouble; insanity; kidney and bladder; knee injured; knee, stiff; knee, swelling in; la grippe; lame, leg too long; leg too short; leg poisoned; leukemia; liver trouble; locomotor ataxia; lung trouble; lung fever; lumbago; malaria, measles; meningitis; morphine habit; mumps; near-sightedness; nervous exhaustion; nervous prostration; nervous trouble; neuralgia; nervous debility; ovarian tumor; palsy; paralysis; periostitis; piles; pneumonia; polypus; puerperal convulsions; peritonitis; pleurisy; paralysis of bowels; palpitations of heart; quinsy; rheumatism; running sore; rib broken; rupture; salt rheum; scalding; scarlet fever; scrofula; skin eruption; skull fracture; sick headache; spasms; seasickness; sleeplessness; smallpox; spinal meningitis; sore throat; spinal disease; spine, curvature of; sciatica; stone cancer; stigmatism; stiff hip joint; stomach trouble; sunstroke; synovitis; symmetrical keratiases of the palms and soles; tapeworm; throat trouble; tobacco; toothache; tonsillitis; tuberculosis; telegraphers' paralysis; tuberculosis of bowels; tumor; tumor, fibroid; thigh bone diseased; typhoid fever; ulcers; urinary trouble; ulcers in bowels; varicose ulcer; varicose veins; whisky; wounds; wrist sprained; weak lungs; weak eyes; white diphtheria; wild hairs; whooping cough; yellow fever.

Similar lists might be prepared from the records of cures ascribed to any one of these systems. We would also find cases of the same nature in which cures failed to be effected. But our research under the present circumstances would do us little good as far as obtaining any real knowledge with regard to the validity of the claims is concerned. This is due to the fact that none of these workers keep adequate records. They depend largely on the patients' testimony for diagnosis as well as for evidence of cure. With no control to determine how many patients were actually suffering from the conditions reported or how many of the reported cures were spontaneous or due to other influences than the mental treatment, we have no way of judging whether its representations are based on pure chance results or on demonstrated efficacy. We have also no data that would definitely warrant either a wholesale or a restricted use of the method in general, although it is obvious that many persons believe that they were cured of diverse diseases, and certain phenomena actually have occurred.

On the surface it would appear that it can do no real harm so long as it remains within rational limits; but it is also obvious that when it is carried into absurdities, as is frequently the case, it can become very dangerous. It is remarkable that the entire matter should be so loosely controlled. To place emphasis on the mental side of life is most important; and, when this emphasis includes a sound philosophy and application of common sense, its contribution can hardly be overestimated. But when it results in the promiscuous teaching and practicing of mental tricks and self delusion, it is a positive menace. To disguise such practice in the name of religion or of science as a means of capitalizing the credulity of the ignorant is despicable.

12. Goddard, H. H.: The Effect of Mind on Body as Evidenced in Faith Cures, Am. J. Psychology **10**: 431 ff.

The newer movements within the church are in the same position as are the older movements independently organized. We can pass no judgment on them except from a theoretical point of view until some effort at a reliable evaluation of their work has been made. A similar statement applies also to the more general uses of religion as a therapeutic or reconstructive agent. With so many other factors involved, without controlled experimentation, judgment can be based only on opinion which is far from conclusive evidence.

Few workers in the religious field are aware of the nature of the problem with which they are dealing. This is quite natural, in view of its complexity. The physician would be at as great a disadvantage in the theological field. Knowing so little about medical science, it is not surprising that they are led astray by apparent similarities in their own teachings and those of the other field. The naive Christian Scientist, for instance, might think that Mrs. Eddy's statement that poison has a harmful effect on the body only because every one believes that it will do harm is fully vindicated by the following report, which recently appeared in the New York *Times:*

Stockholm, January 18.—By means of hypnotic suggestion, which made subjects believe that poisons administered to them were nothing but water, Dr. Henry Marcus and Dr. Ernst Sahlgren, Stockholm scientists, have been able to offset to a marked degree the effect of poisons on the human system. This was done in a series of experiments at the Karlclinska Medical Institute to determine the effect of hypnotism on organic diseases. The scientists put three subjects into hypnotic sleep and then administered drugs, carefully recording the effects on blood pressure and pulse both with and without suggestion. When a drug which acts to increase blood pressure was administered without suggestion, the blood pressure readings ranged between 109 and 130 and pulse readings from 54 to 100. With suggestion, the blood pressures were from 107 to 116 and pulse readings all less than 67.

Those who advocate religious therapy will do well to compare their methods with other methods which are similar, but which leave out the religious element for good reasons. In this connection, it is interesting to consider the results obtained through various systems of moralization and reeducation used in the practice of psychiatry. Another system in which religion is purposely eliminated is in Coué's method of autosuggestion, which the religionists have so thoroughly embraced.

Some interesting data are being compiled by Dr. Shaler Lawton and his co-workers at the Columbia University College of Physicians and Surgeons. The results of Dr. Lawton's study may well serve as a warning. He is satisfactorily demonstrating, with certain cases for which medicine can do little, that the patient by exercising his morale may so completely control his attention that instead of fixating it on his symptoms, though they are of the most distressing nature, he believes himself cured and becomes entirely unaware of the fact that his physicial condition remains the same and that his disease is running the natural course of its development. The religious healer, misled by the patient's controlled reaction to his symptoms, may be misleading him to let treatment effective in the earlier stages of the disease pass by until it is too late to help him. On the other hand, we must not overlook the fact that we may be considering an efficient method in the course of evolution, and that trial and error may naturally play an important rôle in its progress.

What this method will finally prove to be can be only a matter of conjecture until the situation has been subjected to more intelligent study. In all probability we shall find that there are indeed certain fundamental principles common to all aspects of the situation, but that they will have to be applied in a great variety of ways.

With so many varieties of human personality, the prerequisite state of mind that is essential to the operation of any method can probably be obtained only through a method of approach suitable to the individual make-up and background. This may be strictly religious in some cases, purely ethical in others, and entirely intellectual in others, while certain individuals of weak emotionalism may be susceptible to the influence of any strong or persistent appeal. If the basic principle is faith in the particular appeal of whatever form and the expectancy that develops, similar results are to be expected from widely differing methods adapted to the particular type of individual.

A broad appreciation of the situation would admit that perhaps no one method, whether religious or otherwise, can be expected to reach all types. It may very well be, however, that the religious appeal based on the functioning of an instinctive mechanism is calculated to affect the largest number of persons, and that it may afford the soundest basis for the expectation of lasting results.

The medical profession has largely ignored and even denied the possibility of this method of approach. Meanwhile, as a reaction against the empiric method and the one-time drastic recourse to drugs, there has developed in some quarters considerable "therapeutic nihilism" except for the comparatively few diseases known by modern science to be susceptible to specific therapy. Still, the present materialistic trend tends too much to discredit methods of psychologic appeal to the alleviation of symptoms and cure of disease. This may be because, in spite of the strong evidence that there is some relationship between mind and body, very little is actually known as to how close this relationship is, how this action takes place, and what its limitations are. But it cannot be overemphasized that the physician should take account of whatever influence there may be between mind and body. Much medical practice has admittedly a bad psychologic effect on the patient. Too little effort, for instance, is made to overcome the tendency to concentrate on symptoms of disease and to give the patient an intelligent grasp of the situation that confronts him. Some physicians will send the patient away with a theory or explanation of his disease not founded on any scientific data, which frequently creates or strengthens an attitude of apprehension and makes for continued invalidism or physical and mental ineffectiveness.

Psychologically speaking, certain physicians thus persistently apply the principle of negative suggestion in conditions in which it may produce real untoward effects. This is quite as true of many practices in psychotherapy as it is of minor material or physical therapeutic methods. The medical profession is largely culpable for the widespread rebellion against such methods, as evidenced by the enormous development of these various forms of faith healing.

The medical problem is to discover the underlying facts and principles and to inculcate those which are sound in a well grounded system of practice which will recognize the true function of the mental and the spiritual as well as the material in the alleviation of human ills. Only in this way will it be possible to confine the practice of these methods to those who can be

depended on to use them with the unselfish motives characteristic of the best types of religious and medical practice.

SUMMARY

1. The prevalence of religious healing and allied cults bears witness to the fact that the maintenance of individual health has become strongly associated in the minds of many people with religious and metaphysical ideas.

2. There is a great variety of sects and cults and movements appealing to this popular tendency to associate health and religion, such as Christian Science, Jewish Science, Divine Science or Divine Healing, New Thought and Scientific Christianity. These are organized outside the church. In addition, there is considerable activity with regard to healing among Theosophists and Spiritualists. Moreover, the work has also been taken up in the orthodox churches, especially in the Episcopal church. The Nazarene movement makes its appeal through the Episcopal church. The Guild of Health confines its work to other Protestant churches. The novena, the application of relics and visits to shrines, such as Lourdes and St. Anne de Beaupré, are well established practices in the Roman Catholic church. Individual clergy and laymen are also engaged in the work.

3. Some of these agencies are but little organized and have an ephemeral prosperity; but there are some that are well organized and with strong indications of being permanent. Christian Science especially has grown steadily since it originated in 1870, and New Thought has a similar history. The Nazarene movement and the Guild of Health have made a strong appeal within the church.

4. It is impossible to make any close estimate of the total number of adherents of this general movement, since some of the cults do not keep records of their membership. The number of Christian Scientists is estimated at 1,500,000. "Unity," a New Thought cult teaching "Scientific Christianity," is said to reach from three to five million people annually through its publications, lectures and prayer services. The Nazarene movement now has about 7,000 members. If the children and other dependents of adherents to these movements are counted, the number may reach 10,000,000. A wide appeal is also made through magazines and books. Some leaders make use of the radio to broadcast their teachings.

5. The attitude toward the medical profession ranges all the way from hearty cooperation, as in the case of certain individual workers and in some church agencies, to frank hostility, as in the case of Christian Science.

6. Enthusiastic testimonials and the apparently stable membership of some of these organizations (such as Christian Science, Unity and other New Thought cults, also the Nazarene movement and Guild of Health) show that many persons believe themselves to derive great benefit from them. It should be acknowledged that, although some of their practices appear unscientific and even bizarre, others must be recognized as of possible benefit under certain circumstances.

7. The leaders of these movements either outside or inside the church are little disposed to set any definite limitations to the power and effectiveness of their therapy. The nature of the problem with which they are dealing is not fully comprehended by any of them.

8. Christian Science makes its approach through the concept that disease is "error," New Thought through the immanence of God, and others through still other metaphysical theories on which they base their practice; but practice itself shows considerable uniformity for all of these cults. It seeks to induce a cheerful, confident, serene state of mind, to remove the attitude of invalidism and similar negative emotions and beliefs, to promote relaxation, and to give full play to the suggestion or autosuggestion of health. Various subjective mental states and religious ecstasy are more or less prominent in the treatment of patients.

9. Those resorting to religious and metaphysical healers often express dissatisfaction with physicians for a lack of sympathy and a tendency to build up an attitude of invalidism. Unless the physician is on his guard against giving negative suggestion, such an attitude can very easily be generated in the patient. Leaders of these cults use this as a strong argument against the medical profession.

10. Since religious healing has for the most part been carried on without expert diagnoses of the cases undergoing treatment and without expert determination of their condition after treatment, it is not possible to pass judgment on the merits, harmfulness or limitations of this movement. Where spiritual therapy has been attempted under medical control, the results seem to indicate that:

(*a*) Neurotic patients, alcoholic habitués, drug addicts and the like are sometimes improved by the treatment.

(*b*) The morale and comfort of a patient with organic disease may be improved, while the disease continues to run its course.

There is no way of evaluating the results obtained through religious healing as compared with those obtained with the same types of patients through nonreligious suggestion. Controlled experiments are needed to obtain further data as a basis for judgment of the comparative efficacy of such treatment. Studies of suggestion of a nonreligious nature as a therapeutic agent show that it is quite possible to teach the patient so to control his attention that he is able largely to ignore his symptoms.

11. A scientific study should sharply distinguish between the practice and the theories advanced by these various cults. Probably more attention should be accorded to the practice than to the theory. The theory is perhaps considered necessary as a means of getting hold of the patient, and this no doubt varies to a certain extent. Different persons require different "theories" or modes of approach. The question arises whether or not a scientifically sound basis could be formulated for whatever is useful in these practices, so that the essence of the practice (so far as it may be found good) might be employed with good conscience in treating the sick.

12. Further study should deal with the following problems:

(*a*) What is the common essential of these various practices?

(*b*) How can this essence be given a form and rationale suited to scientific use?

(*c*) What are the benefits, limitations and dangers of these practices as established by a careful try-out under controlled conditions, carried on by physicians in cooperation with interested clergymen?

13. An adequate study will involve much work extended over a long period of time and carried on under unquestioned auspices by a most carefully selected personnel.

14. The whole problem is a serious one which the medical profession should not ignore.

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SATURDAY, MAY 29, 1926

THE HUMORAL MECHANISM AND HORMONE OF EXTERNAL PANCREATIC SECRETION

The remarkable secretory responses that can be secured through stimulation of certain nerves that supply the salivary glands are among the classic demonstrations of experimental physiology. Interruption of the nervous paths, either mechanically or through the action of drugs, is promptly followed by cessation of the characteristic function. Such observations have doubtless been responsible to a considerable degree for the widespread assumption that secretion in general occurs primarily in response to excitation of active cells through nervous paths. In recent years, however, evidence has accumulated to indicate that the promotion of secretory activity can be secured through the blood channels as well as the extrinsic nerves. This is currently described as the humoral, in contrast with the nervous, secretory mechanism.

Ivy and Farrell [1] recently demonstrated that a gastric pouch can be transplanted extra-abdominally into the mammary gland after severance of all nervous connections of the stomach fragment. Such transplants exhibit motility in unison with that of the unharmed gastric residual organ; and they also can secrete an acid juice after a meal or the administration of a secretagogic substance such as histamine. Comparable transplants of pancreatic tissue behave in an analogous secretory manner. According to Ivy,[2] the fact that they secrete continuously, being excited to greatly augmented pancreatic juice output after a meal, definitely establishes a humoral mechanism for pancreatic secretion; for one could scarcely expect the severed nerves to establish their connections in the midst of the far away mammary gland. Ivy and Farrell [3] have also provided what they regard as unequivocal proof that a hormone is concerned in the genesis of the external secretion of the pancreas. When both the pancreas and an independent loop of jejunum were transplanted, thus severing the nervous connections of each, the pancreas transplant secreted copiously after application of dilute hydrochloric acid to the mucosa of the intestinal transplant. Several minutes elapse before the response is secured; how else can it have been attained except through the transport of some newly generated or liberated substance carried by the circulation to its locus of action?

It is not easy to understand why the somewhat comparable salivary and pancreatic glands should behave so differently. Perhaps the correct explanation was ventured long ago by Starling.[4] Commenting on the insignificant secretory response of the pancreas to nervous stimulation, he remarked that whereas in the mouth the reaction, which must be rapid, is entirely nervous, in the stomach there is a mixture of the nervous mechanism with the more primitive chemical mechanism. The nervous secretion preponderates in this viscus. When we come to the pancreas, the primitive chemical mechanism, namely, the formation of hormones and their circulation through the blood to the reactive tissue, suffices to account for the whole activity of the gland, and it is doubtful whether in this activity the nervous system plays any part whatever.

1. Ivy, A. C., and Farrell, J. I.: Demonstration of a Dog with a Transplanted Gastric Pouch and of a Dog with a Pancreatic Transplant, Am. J. Physiol. **76**: 226 (March) 1926. Farrell, J. I., and Ivy, A. C.: Studies on the Motility of the Transplanted Gastric Pouch, ibid., p. 227.
2. Ivy, A. C.: The Proof of a Humoral Mechanism for Pancreatic Secretion, Am. J. Physiol. **76**: 178 (March) 1926.
3. Ivy, A. C., and Farrell, J. I.: The Proof That a Hormone Is Concerned in External Pancreatic Secretion, Proc. Soc. Exper. Biol. & Med. **23**: 577 (April) 1926.
4. Starling, E. H.: Recent Advances in the Physiology of Digestion, Chicago, W. T. Keener & Co., 1906.

ACIDIFIED MILKS

The action of hydrochloric acid in the process of digestion is largely, if not entirely, due to the number of free hydrogen ions present. Various foods, especially milk, have the property of binding large amounts of acid and converting the hydrogen into a nonionized form, thus to all intents and purposes neutralizing the acid. When foods of the type mentioned are given, much of the hydrochloric acid secreted is rendered inactive. Substances that thus reduce the hydrogen ion concentration are commonly termed "buffers." It has been demonstrated that the buffer value of cow's milk is considerably greater than that of human milk. Therefore the former neutralizes a larger amount of the hydrochloric acid of the stomach secretion. The resultant effect is an interference with the activity of the gastric enzymes through a reduction of the gastric acidity below the optimal hydrogen ion concentration zone of p_H 3.5 to 5.0. By the addition of an acid to cow's milk, its excess buffer salts may be counteracted and its digestibility made to simulate more nearly that of human milk. This method does not entail any appreciable reduction of the food elements, as pertains to the ordinary method of simple dilution.

Along with the demonstration and realization of these facts has come the practice of employing bacterially soured milks and also "debuffering" cow's milk

with acid for use in clinical pediatrics. It is based on the assumption that the excess of buffers in cow's milk delays, and in many cases prevents, the completion of gastric digestion in infancy by inhibiting the acidity necessary to the optimal efficiency of the gastric enzymes. Particular emphasis is laid on the importance of gastric lipase. According to Faber, the principle that acidified milk favors the splitting of fats in the stomach may be used in the treatment of various disorders of digestion, particularly intolerance to fat and to sugar. In the latter case an increased digestion of fats appears largely to compensate for the necessary reduction in sugars. A recent writer [1] summarized the present situation in the remark that the rationale of adding an acid to cow's milk to improve its digestibility has been demonstrated by Clark [2] and Faber,[3] and popularized by Marriott.[4] The old fashioned recommendation of additions of lime water has accordingly fallen into disuse, for they are destined to increase the difficulties of gastric digestion at times when this alimentary function may already be under severe stress. Milk modified by the addition of acid has advantages, over bacterially soured milk, of convenience in preparation.

To decrease the digestive burden on the stomach in infants of lessened gastric digestive capacity, acidification of milk may be accomplished in this artificial way by the addition of various acids. Hydrochloric acid, lactic acid, citric acid in the form of lemon juice, and acetic acid as vinegar have all found champions, the choice apparently having been determined by considerations of immediate convenience. The lactic acid procedure has perhaps the greatest vogue at the moment. Partially debuffered milk has a practically unaltered taste and therefore is freely taken without objection by infants who dislike highly acid products. The organic acids mentioned are readily burned in the organism; hence, in contrast with the mineral acid, they function ultimately as potential bases in the metabolism.

There is always danger that a successful therapeutic measure may find application beyond its actual indications. A warning has lately been sounded by Faber [5] of the Stanford University Medical School, who advances the thesis that, on the basis of the available studies, acidified milk may be considered a useful therapeutic agent for certain specific disorders. As such, however, it should be given only when there are specific indications, and for periods of time limited by the regression of symptoms. Organic as well as inorganic acids deflect metabolism from the normal to a recognizable, though not as yet fully determined, extent. For this reason, Faber believes, the routine use of sour milk in the feeding of normal infants is not to be encouraged. For them, modification of cow's milk by dilution and carbohydrate addition remains the method of choice. The clinician should learn the main indications for the use of the acidified products and "play safe" by limiting his prescriptions to them.

1. Dunham, B. S.: Acidification of Milk with Vinegar (Acetic Acid) in Infant Feeding, Am. J. Dis. Child. **29**: 200 (Feb.) 1925.
2. Clark, W. M.: The Reaction of Cow's Milk Modified for Infant Feeding, J. M. Research **31**: 431, 1914.
3. Faber, H. K.: Hydrochloric Acid Milk in Infant Feeding, Am. J. Dis. Child. **26**: 401 (Nov.) 1923.
4. Marriott, W. M., and Davidson, L. T.: Acidified Whole Milk as a Routine Infant Food, J. A. M. A. **81**: 2007 (Dec. 15) 1923; The Acidity of the Gastric Contents of Infants, Am. J. Dis. Child **26**: 542 (Dec.) 1923.
5. Faber, H. K.: Acidified Milks, Am. J. Dis. Child. **31**: 395 (March) 1926.

LIGHT AND THE EFFECTS OF VITAMIN A

The beneficial effects of sunlight on the human organism have received a significant interpretation through the more recent studies of nutrition. The discovery that rickets represents a true deficiency disorder, and that it can be cured or averted by definite vitamin-bearing foods and certain types of radiant energy alike, has directed attention to the newly recognized potencies of both vitamins and light. Cod liver oil and egg yolk contain antirachitic material. They also furnish liberal amounts of vitamin A, which prevents keratinization of various groups of epithelial cells in the body, of which xerophthalmia is the classic experimental indication. Students in this field of study have already insisted that antiophthalmic and antirachitic potencies should not be regarded as in any sense identical, even though certain food products embody both of them. To emphasize the distinctions, the two properties have already been given separate designations as vitamins A and D, respectively. Thus, cod liver oil and egg yolk contain both; milk fat is comparatively rich in vitamin A and poor in the D factor; and this seems to be true of many "green" foods.

These assertions are based on animal experimentation; nevertheless it has not yet been easy to eradicate the assumption that ultraviolet radiations will replace vitamin A as well as the antirachitic factor. Since deficiency of vitamin A, as exemplified by the characteristic symptom xerophthalmia, has not been extensively encountered in the clinics of this country, there has been little opportunity to test the possible efficacy of light. Recently Bloch [1] of Copenhagen, who has been a pioneer in the study of the xerophthalmias of childhood, has taken occasion to investigate the question in suitable cases. His careful studies indicate that exposure either to the carbon arc light or to sunlight does not cure xerophthalmia. Light cannot replace vitamin A or supply it to the animal organism. Enthusiasm for the benefits of radiant energy and the outdoor life should not, therefore, warrant any one in overlooking the ever present need of vitamin A. Light is not a universal panacea for all human ills. Specific food needs must also be met by any program of physiologic welfare.

1. Bloch, C. E.: Light and the A-Body, Am. J. Dis. Child. **31**: 315 (March) 1926.

The public is becoming increasingly familiar with the immunity gained toward certain microbic diseases by a course of prophylactic treatment. Protection thus secured has become popular and is freely welcomed. Parents and children alike even exhibit eagerness to acquire the obvious advantages. Unlike such immunities, the protection gained at any time through diet against the deficiency disorders represented by lack of vitamins is far less persistent. Consequently, prophylactic measures should not be abandoned when relief seems assured. Bloch has cited illustrations of the wisdom of this advice in connection with the supply of vitamin A; and Hess [2] has lately issued a similar warning in relation to rickets. He points out that recurrences are very frequent, especially during the second year of life. This being the case, it is clear that specific therapy—whether with cod liver oil or ultraviolet irradiation—should be continued after all signs and symptoms of rickets have disappeared. Furthermore, cod liver oil should be given not only during the first, but also during the second winter. This is advisable particularly in regard to infants who have had rickets and who are, therefore, susceptible to a recurrence in the course of the subsequent winter. The mention of the season has reference, of course, to the periods of greatest incidence of the malady.

2. Hess, A. F.: Recurrent Rickets, Am. J. Dis. Child. **31**: 380 (March) 1926.

EUTHENICS

It has been argued that "the accomplishment of a true eugenic program will be the crowning work of the health movement and the grandest service of science to the human race." But present woes demand consideration while we are contemplating future joys. The consequences of innumerable past events press on us; we must try to offset the discomfort or damage of "the heavy hand of the past" and likewise of the ever present menaces of the present. Furthermore—and this is less often adequately emphasized—we must attempt to capitalize omnipresent advantageous possibilities for the future, when opportunity knocks at the door. In matters of health this is sometimes described as an interest in hygiene, the discipline that teaches how to create for ourselves healthful conditions of living. However, human welfare contrasted, perhaps, with mere bodily well being involves a larger objective than individual or public health. It is not merely concerned with curative and preventive medicine; there is the added duty of man to better his conditions by availing himself of added knowledge already at hand. With this in mind, Ellen H. Richards selected the expression "euthenics" to describe "the betterment of living conditions, through conscious endeavor, for the purpose of securing efficient human beings." As a recent writer has added, this does not refer to the efficiency of the factory, which makes a man into a machine to turn out a specific product in the shortest possible time, but the efficiency of the thoroughly sound, highly trained mind in the thoroughly sound, highly trained body, which can accomplish the routine tasks of every day with the minimum of time and effort, leaving over a great store of energy for the additional duties and pleasures of an abundant life.

The contemplation of these purposes through academic training is by no means new. For many years the so-called home economics movement in this country has been concerned with varied aspects of the inclusive problem of how to live. At first the more purely material aspects of the subject—problems of food, clothing and shelter—were most stressed, until the training has extended its ramifications into the curriculums for women in all the state universities. There are indications that even the more conservative colleges for women are contemplating the transfer of emphasis in part from the subject to the object of study. Thus, Vassar College has lately given recognition to eugenics as a field for major study.[1] Properly enough, this has not called for new subjects of instruction, but rather a selection of topics with some motivation of interest in them; physiology, psychology, economics, political science, and even botany and zoology may contribute to the end. It already appears that the most popular combination for a "euthenics major" is that dealing with child welfare, for which the most important courses are child hygiene, child psychology, chemistry of food and nutrition, heredity, charities and corrections, and the family. In every case the courses chosen must have a common focus and must be preceded by training in the elementary sciences, with special emphasis on the general principles of physiology, psychology and economics.

There is no unanimity of opinion with respect to the principles of education. The stress on "practical" or "applied" courses will be debated by many with the contention that apprenticeship in everyday life affords the best training in vocational directions. It is a fact, however, that the traditional curriculum for women is changing. The growing power of women in the field of child health, child protection and child education must be recognized. Eugenics is supplementing hygiene. Professor Cockerell [2] has recently made a plea for something more than mere direct utilitarian concern with the resources about us:

> Is our great undertaking to include simply the sources of food or shelter or clothing? Or if we include the flowers, is it only because they can be eaten by cows, or because innocent people will sometimes buy them, and so give them commercial status? I do not so understand it. We live in a great and wonderful environment, to which we may react in a thousand ways. Broadly speaking, happiness comes through the harmonious exercise of our faculties. To be blind where we might see, callous where we might feel, dumb where we might speak—these are the great futilities, in the presence

1. Macleod, Annie Louise: Euthenics at Vassar, J. Home Economics **18**: 119 (March) 1926.
2. Cockerell, T. D. A.: The Duty of Biology, Science **63**: 367 (April 9) 1926.

of which material wealth is of small account. Thus we must hold that our resources are only limited to those things which we can appreciate with our senses, and get some good by so doing. Wealth of this kind is so abundant that there is more than enough for all. No one can use more than a small part of it, but many minds and hearts, with a common purpose, may approach a grand synthesis which some genius will clarify and define. This is the manner of intellectual progress.

Current Comment

FREAK MEDICAL PATENTS

At various times THE JOURNAL has called attention to the fact that the United States Patent Office is, apparently, unaware that there is such a thing as modern medical knowledge. An article in a current magazine[1] details a number of patents that have been issued for bizarre products and devices of a medical or a medicinal nature. These include Perkins Tractors, Sanche's Oxydonor, the tapeworm trap of Meyers, the "consumption cure" of Serghison, and several others. A patent issued March 1, 1921, to one Mary McGuire Wilson for the "Process of and Material for Reducing Fatty Tissue" could well have been added to the list. According to the patent specifications (no. 1369997), the Wilson formula for reducing weight is: alum, 12 ounces, camphor, 2 ounces; alcohol, 12 fluidounces, and witch hazel, 32 fluidounces. This mixture—which the United States Patent Office considers a new and useful invention—is to be applied to the skin of the "stylish stout" immediately following a hot tub. The stuff is then "whipped or spanked with the fingers to drive the solution into the pores." After this the skin is rolled and another application is made and duly "spanked" in. This is described in the patent specifications as a "process of reducing fatty tissue." Finally the body is sponged with water, to remove any alum that may remain on the skin. Mary McGuire Wilson was granted not only a product patent on her mixture of alum, camphor, alcohol and witch hazel, but also a process patent for applying this ridiculous piece of hokum. Will the patent office never grow up, medically speaking?

A GOVERNOR AND MEDICAL PRACTICE

When the governor of the state of New York signed the Webb-Loomis bill, May 17, he issued an announcement to the voters of the state explaining his action. In that announcement, the governor pointed out that he had had the subject under consideration since the fall of 1924, and that in the interest of the public health he had continuously urged the enactment of legislation which would rid New York of illegal practitioners. An explanation of the Webb-Loomis bill appeared in our columns a few weeks ago. In his discussion of its stipulations, the governor emphasizes particularly the annual registration of all practitioners, the opportunity afforded through a grievance committee for the profession to clean its own house, the provision for prosecution by the attorney-general of all violations of the law, the establishment of minimum requirements for those practicing physiotherapy, and regulation of the use of the title "doctor." Of the latter, the governor said:

> I regard it as highly important that the ignorant and the unthinking be not misguided by the use of the title "Doctor" because it presupposes in the minds of a great many people a knowledge of the human anatomy sufficient to enable the holder of such title to diagnose and prescribe for all the ills the human body is heir to. The title "Doctor" should be made by law to mean what the great majority of people believe it means, and it should not be promiscuously bestowed upon individuals so lacking in proper qualification as to be unable to tell the difference between indigestion and hydrophobia. There is no function of government to my mind more important than the preservation of the public health.

SYPHILITIC INFECTION FROM THE CADAVER

Through long custom, one is apt to forget the dangers attendant on certain occupations and to neglect the precautions that should be taken in connection with them. It may therefore be timely to call the attention of physicians, pathologists and others who have occasion to handle cadavers to the possibility of contracting syphilis in this manner. There has been some doubt concerning the possibility of infection from the bodies of persons dying of syphilis, and the tendency exists to regard the matter lightly. The report of a number of instances and the results of recent experiments indicate, however, that the danger is actual. Erich Hoffmann[1] recently collected from the literature reports of nine certain and seven probable cases of syphilis contracted from cadavers. Since many such accidents would probably be kept secret, or at least not published, this must be far less than the actual number. He found that postmortem multiplication of spirochetes takes place not only in macerated fetuses and in the bodies of infants with congenital syphilis, but also in bodies of adults and of rabbits infected with syphilis. Motility of the organisms is retained for from twenty-four to thirty-six hours, and form and staining reactions for many days. Their virulence apparently lasts at least twenty-four hours, and Koch reported the infection of a rabbit with tissues taken from a cadaver three days after death. A few years ago, Kratzeisen[2] investigated the viability of spirochetes from six syphilitic cadavers. He found that spirochetes kept in various fluids, including water, serum and bile, multiplied for from twelve to twenty-four hours. In most cases they showed beginning degeneration only after twenty-four hours, and complete destruction at the end of seventy-two hours. They lived longest in bile, so that one would expect infection to take place most readily from the liver. From these results it would appear easy for one, in performing a necropsy on a syphilitic cadaver, to contract the infection through a scratch or abrasion in the skin.

1. Cramp, A. J.: Patent Office Magic—Medical, American Mercury, June, 1926.

1. Hoffmann, Erich: Ueber Syphilisinfektion mit Leichenmaterial und eventuelles Schmarotzertum der Spirochaeta Pallida, München. med. Wchnschr. **73**: 185, 1926.
2. Kratzeisen, Ernst: Ueber postmortale Spirochätenvermehrung in der Leiche, Centralbl. f. Bakteriol. **90**: 91, 1923.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALABAMA

Personal.—Dr. George E. Blue, Montgomery, was elected president of the Alabama Power Company Surgeons at the annual meeting, May 12, to succeed Dr. Aaron L. Harlan, Alexander City; Dr. Samuel R. Benedict, Birmingham, the chief surgeon, was presented with a watch by other members at this meeting.

ARKANSAS

Hospital News.—The new building for advanced cases of tuberculosis to replace the building recently destroyed by fire at the Arkansas Tuberculosis Sanatorium will be completed in June——A building being erected by the Ancient Order of United Workmen of Arkansas which will be donated to the state for a general hospital, will be ready for occupancy in July.

State Medical Election.—At the annual meeting of the Arkansas Medical Society, Hot Springs National Park, May 18-20, Dr. James M. Lemons, Pine Bluff, was elected president; Dr. Henry Thibault, Scott, president-elect; Drs. Grayson E. Tarkington, Hot Springs National Park, Thomas F. Kittrell, Texarkana, and James H. Fowler, Harrison, vice presidents; Dr. Royal J. Calcote, Little Rock, treasurer, reelected, and Dr. William R. Bathurst, secretary-editor, Little Rock, reelected. The next annual meeting will be in Little Rock.

CALIFORNIA

L. T. A. Hotten Given Two Years.—The founder of the so-called U. S. Charity Anti-Cancer League, Dr. Lewis T. A. Hotten, who was recently convicted on a narcotic charge, was sentenced, March 29, to two years in the federal prison. The records of the state board of medical examiners show, it is reported, that Hotten's name used to be Hottendorf.

Dr. Bloomfield Appointed Professor of Medicine.—Dr. Arthur L. Bloomfield, associate professor of medicine, Johns Hopkins University Medical School, Baltimore, has been appointed professor of medicine at Stanford University Medical School, San Francisco, beginning with the year 1926-1927. Dr. Bloomfield graduated from the medical department of Johns Hopkins in 1911, and has been connected with the faculty of his alma mater since 1912.

Society News.—A recent meeting of the Alameda County Medical Society was devoted to a symposium on smallpox; Dr. Newton E. Wayson, San Francisco, discussed "Epidemiology of Smallpox"; Dr. Arthur A. O'Neill, San Francisco, "Diagnosis and Treatment of Severe Smallpox"; Dr. John N. Force, Berkeley, "Administrative Application of Intradermal Methods of Vaccination."——The Women Physicians Club of San Francisco, which was recently inaugurated, now has ninety-three members, and under the guidance of its president, Dr. Louise B. Deal, joined the California Federation of Women's Clubs.—Dr. Harold Brunn, professor of surgery, University of California Medical School, addressed the San Joaquin Medical Society, April 1, on "Lung Surgery."

CONNECTICUT

Personal.—Dr. Charles G. Rankin has been appointed health officer of Glastonbury to succeed Dr. Theodore B. Ackerly.——Dr. Alfred J. Finn has been the acting health officer of Waterbury since the death of Dr. Thomas J. Kilmartin.——Dr. Howard D. F. Lockwood has been appointed health officer of Meriden to succeed Dr. Joseph A. Cooke.

Conference on Social Work.—Dr. Alice Hamilton, professor of industrial medicine, Harvard University School of Public Health, addressed the recent Connecticut Conference of Social Work, which was held at Norwich. Among the other speakers were Dr. Elton Mayo, formerly of Australia, now of the University of Pennsylvania, Philadelphia, and George W. Kirchwey, LL.D., New York.

Bulletin on Rabies.—The state department of health issued a bulletin, May 10, in which it is said that for the ten months ending April 30 the department laboratories examined seventy-five heads of animals, of which thirty-one were positive for rabies. This constitutes more examinations than has been made for a similar period in any of the preceding seven fiscal years. The bulletin also notes the precautions that should be taken to avoid exposure to rabies.

GEORGIA

University News.—Mr. A. S. Bourne, Augusta and New York, has donated to the department of internal medicine of the University of Georgia School of Medicine $5,000, which will be used for the purchase of equipment.

Personal.—Dr. Hudnall G. Weaver is serving as temporary health officer of Macon, pending the selection of a successor to Dr. Charles L. Ridley, who resigned, May 1, to become medical director of the Bankers' Health and Life Insurance Company.——Dr. William C. Humphries, Acworth, who has been appointed health officer for the city of Griffin and Spalding County, will take up his new duties, June 1.

Medical Moral Turpitude.—In a recent decision, the Supreme Court of Georgia upheld the state board of medical examiners in revoking the licenses of Drs. N. A. and T. W. Hughes, Atlanta. The court said in part that the legislature may enact that one who has been convicted of crime "involving moral turpitude" should no longer practice medicine. It was pointed out that the act of 1918 declares that a licentiate's name be removed from the records in the office of any clerk of court, and his license revoked on the ground of conviction of crime involving moral turpitude. The Hughes cases were appealed from the Fulton Superior Court, which had upheld the state board of medical examiners in revoking the licenses of Drs. N. A. and T. W. Hughes, Oct. 9, 1924, the charges by the board in each case having been, first, advertising to treat venereal diseases, and, secondly, having been convicted and sentenced in federal court in Dallas, Texas, in 1914 for using the mails for fraudulent purposes.

ILLINOIS

Naprapaths Arrested.—Perley W. Johnson and William Sandell, naprapaths of Barrington, were arrested, April 16, it is reported, on a state warrant charging them with practicing medicine without a license; they were released under $2,500 bonds.

Personal.—Dr. Cyrus H. Anderson, formerly superintendent of the Illinois State Hospital at Anna, assumed charge of the state hospital at Watertown, May 15, succeeding Dr. Joseph H. Ellingsworth, who was transferred to the state institution at Alton.——Dr. Glenn J. Tygett has resigned as city health officer of Anna and accepted a position on the staff of the Anna State Hospital.——Dr. Bellenden S. Hutcheson has been reappointed health officer of Cairo.

Hospital News.—The new Madison County Sanitarium at Edwardsville was formally opened to the public, May 7.—— The new U. S. Veterans' Bureau Hospital, erected at Five Points, North Chicago, for the care of mentally ill veterans, was dedicated with appropriate ceremonies, May 15. Among the speakers at the ceremonies were Gen. Frank T. Hines, Washington, D. C., director of the Veterans' Bureau; Mr. Scott W. Lucas, commander of the American Legion, Department of Illinois, and other distinguished civilians.—— Springfield's new $100,000 contagious disease hospital was opened, May 13.

Chicago

Rush Alumni Clinics.—Rush Medical College will conduct, June 14-18, a clinic week for the benefit of its alumni, which will become an annual event if it proves of general interest. Members of the faculty have heartily responded to the plan, and suggestions from the alumni, addressed to Rush Medical College, Harrison and Wood streets, will be appreciated. The annual faculty and alumni dinner will be at the Auditorium Hotel, June 15, 7 p. m. Among other reunions, the 1916 class will hold its tenth anniversary at this time.

Conference on Tuberculosis.—Special features at the Mississippi Valley Conference on Tuberculosis, Chicago, June 14-16, Edgewater Beach Hotel, will be the annual banquet, a child health education luncheon, a seal sale conference, and a secretaries' luncheon; among the topics for discussion will be the education of the layman, after-care and employment of the tuberculous, chest surgery, and tuberculosis in industry. Dr. Linsly R. Williams of the National Tuberculosis Association; Charles E. A. Winslow, Dr.P.H., president American Public Health Association; Dr. James A. Britton, Chicago; Dr. Anthony J. Lanza, New York; Drs. John M. Dodson, Frank L. Rector and Morris Fishbein, all of Chicago, will address the conference.

Society News.—Dr. Carl Beck addressed the Chicago Medical Society, May 26, on "Medicine in Europe."——The annual meeting of the Chicago Neurological Society was held at the new prison at Statesville, May 22; among others, Dr. Sanger Brown, president, gave an historical sketch of the society; the scientific program was in charge of Dr. Herman M. Adler and his assistants.——Dr. Agnes V. Fuller addressed the Chicago Council of Medical Women, May 25, on "Cesarean Section."——At the recent annual meeting of the Chicago Tuberculosis Society, Dr. Henry C. Sweany was elected president; Dr. Hiram H. Bay, vice president, and Dr. Walter H. Watterson, Maywood, secretary.——Dr. Edward S. Blaine has been elected president of the Chicago Roentgen Society; Dr. Walter T. Bronson, vice president, and Dr. Robert A. Arens, secretary-treasurer.

KANSAS

State Medical Election.—At the annual meeting of the Kansas Medical Society, Kansas City, May 4-6, Dr. Francis A. Carmichael, Osawatomie, was elected president; Dr. Benjamin F. Morgan, Clay Center, president-elect; Drs. Earle G. Brown, Topeka, Ivan B. Parker, Hill City, and Jonathan B. Carter, Wilson, vice presidents; Dr. John F. Hassig, Kansas City, secretary, and Dr. George M. Gray, Kansas City, treasurer.

Personal.—Dr. Roland G. Breuer has resigned as assistant superintendent of the Kansas State Tuberculosis Sanatorium at Norton to accept a position in Cincinnati as medical director of a pharmaceutical company.——Gerald W. Smith, Pittsburg, Kan., and Fred E. Angle, Kansas City, members of the senior class at the University of Kansas School of Medicine, have received appointments as assistant surgeons, lieutenant, junior grade, in the U. S. Navy Medical Department, and will report for duty, July 1; the appointments followed examinations held, January 4, at Great Lakes Naval Training Station, Ill.

Society Bestows Gold-Headed Cane.—The Rice County Medical Society celebrated the fiftieth anniversary of the graduation in medicine of Dr. Powhatan P. Trueheart at a dinner in Sterling, March 25, and commemorated the event by presenting to the guest of honor a gold-headed cane, bearing the inscription "1876-1926 Dr. P. P. Trueheart. From Rice County Medical Society." Dr. Trueheart spoke on "Then and Now," to which Drs. Charles E. Fisher and Horace G. Welsch and Mr. W. B. Wirshing responded; six physicians who began the study of medicine in Dr. Trueheart's office were assigned to speak on "One of His Boys." All members of the society were present except two, who were unavoidably absent.

MAINE

State Medical Meeting.—The seventy-fourth annual meeting of the Maine Medical Association will be at Poland Springs, June 10-12, under the presidency of Dr. Joseph D. Phillips, Southwest Harbor. The house of delegates will meet Thursday, 7:30 p. m., at the Riccar Inn, and the council at the close of the meeting of the house of delegates. Dr. Wendell C. Phillips, New York, President of the American Medical Association, will deliver the address at the banquet, Thursday evening; other visiting speakers will be Dr. John B. Deaver, Philadelphia, "Surgical versus Medical Treatment of Gallbladder Diseases"; Dr. Joseph Muir, New York, "Radiotherapy of Cancer of the Uterine Cervix," and Dr. Fred J. Tees, Montreal, "Treatment of Some of the Commoner Fractures." There will be a symposium on obstetrics, Saturday morning, by Drs. Leonard H. Ford, Bangor; Harold W. Garcelon, Auburn; Adam P. Leighton, Jr., Portland; Ralph L. Reynolds, Waterville, and Foster S. Kellogg, Boston. Entertainment has been provided for the ladies, and a golf tournament arranged for Saturday afternoon.

MASSACHUSETTS

Hospital News.—The new St. Luke's Hospital, Pittsfield, was formally opened, April 18, under the management of the Sisters of Providence. The hospital is five stories high with a complete hospital unit on each of the four upper floors. There are seventy-five private rooms, eight small wards, and ten rooms of two beds each. When fully completed, the investment will represent about a half million dollars.

Society News.—Dr. Milton C. Winternitz, dean, Yale University Medical School, New Haven, Conn., addressed the Fall River Medical Society, April 8, at its annual dinner on "Recent Advances and Studies in the Pathology of the Cardiovascular System," illustrated by photomicrographs.——Dr. George F. MacKay, Dalton, has been elected president of the Berkshire District Medical Society, and Dr. A. C. Smith, president of the Plymouth District Medical Society.

Study of Tropical Diseases.——The *Boston Globe*, May 14, announces that Dr. Richard P. Strong, professor of tropical medicine, Harvard University Medical School, will lead an expedition to Liberia next month, for the purpose of studying tropical diseases and the effects of certain remedies on them. Other members of the party will be Dr. George C. Shattuck, Joseph Bequaert, Ph.D., and Glover M. Allen, Ph.D., secretary, Boston Society of Natural History. Max Theiler, also a botanist, a photographer and a zoologist, will be in the party.

State Medical Meeting.—The one hundred and forty-fifth annual meeting of the Massachusetts Medical Society will be held at the Hotel Kimball, Springfield, June 8-9, under the presidency of Dr. James S. Stone, Boston. The secretaries of the district medical societies will have a luncheon at 1 p. m., Tuesday, and various scientific sections will meet at 2 p. m. There will be a symposium on peptic ulcer in the section on surgery, in which Drs. Charles L. Connor, Boston, Ernest L. Davis, Springfield, Frank H. Lahey and Franklin W. White, both of Boston, Albert A. Berg, New York, and Charles H. Mayo, Rochester, Minn., will take part. Among others, Drs. James A. Miller, New York, and Wyman Whittemore, Boston, will address the section on tuberculosis, and Dr. Leo V. Friedman, Boston, and George W. Kosmak, New York, the section on obstetrics and gynecology; Tuesday evening, Dr. William Darrach, New York, will deliver the Shattuck lecture, his subject being "The Interrelations of the Physician and the Hospital." The section on medicine which meets Wednesday morning at 9 o'clock will be addressed by Drs. Charles H. Lawrence, Jr., Boston; Burton E. Hamilton, Boston, and Henry S. Plummer, Rochester, Minn. Among others, Dr. Donald S. King, Boston, will address the section on pediatrics on "The Relation of the School Physician to the Family Doctor," and Dr. Edwin T. Wyman, Boston, the section on radiology and physiotherapy on "Clinical Application of Ultraviolet Rays." Dr. Charles F. Painter, Newton, will deliver the annual discourse, Wednesday afternoon on "Educational Requirements for Twentieth Century Practice: Who Should Determine Them and How They May Be Best Achieved?" The annual dinner will also be Wednesday afternoon, and on Wednesday morning a "college town" automobile trip for ladies to Mount Holyoke, Amherst, Massachusetts Agricultural and Smith colleges.

MINNESOTA

University News.—Dr. Leon Velasco Blanco of the University of Buenos Aires visited the University of Minnesota in April to arrange for an exchange of professors of the medical schools of the two universities for next year.

Dr. Taylor Honored.—The Minnesota Trudeau Medical Society gave an anniversary dinner at the Masonic Temple, St. Paul, May 17, in honor of Dr. Henry Longstreet Taylor, and to commemorate his founding the first permanent tuberculosis sanatorium in the state. Dr. Arthur A. Sweeney was toastmaster, and the speakers were Dr. Robinson Bosworth, superintendent, Municipal Sanatorium, Rockford, Ill., and Dr. Pearl M. Hall, superintendent, Minnesota State Sanatorium, Ah-gwah-ching. Dr. Taylor has been engaged in antituberculosis work since 1893; he opened the Pokegama Sanatorium, the first permanent institution for the treatment of tuberculosis in Minnesota, in 1905; he was elected president of the Minnesota Public Health Association in 1924, and a vice president of the National Tuberculosis Association in 1925.

MONTANA

State Medical Meeting.—The annual meeting of the Montana Medical Association will be at Billings, July 16-17, following the meeting of the Montana Health Association, July 14-15, and that of the Montana Academy of Oto-Ophthalmology; among the visiting speakers will be Drs. William J. Mayo, Rochester, Minn.; Lawrence Webster Fox, Philadelphia; Morris Fishbein and Henry Schmitz, both of Chicago; Frederick M. Allen, Morristown, N. J., and Arthur D. Dunn, of the University of Nebraska. Entertainment has been arranged to include golfing, fishing, swimming and trips to the mountains for those who remain over Sunday, the eighteenth.

Rocky Mountain Spotted Fever.—There had been twelve cases of spotted fever this season reported to the state board of health up to May 12, a smaller number than usual. A

fatal case was reported as occurring in Mineral County, and was the first case ever reported as occurring there. Three cases occurred in Ravalli County, with one death; the two patients that recovered had each had one dose of vaccine; two fatal cases occurred in Missoula County; two cases were reported from the vicinity of Malta, two in Garfield and one each in Golden Valley and in Wheatland County. The vaccine developed by Drs. Spencer and Parker, working for the U. S. Public Health Service in cooperation with the state board of entomology, is not yet available for general distribution, but more than 500 people in the Bitter Root Valley have been vaccinated this year. The state board requests physicians to report promptly any cases coming under their observation.

NEW YORK

Hospital News.—Governor Smith signed an act, May 6, appropriating $12,500,000 for the improvement of state hospitals; this money will be taken from the $50,000,000 hospital bond issue; a similar sum was appropriated last year.

Mental Clinic.—Dr. George W. Goler, city health officer, Rochester, announces that a city mental clinic will be started, September 1, in cooperation with the University of Rochester School of Medicine. The schools and various other organizations are requested to send "problem cases" to the clinic.

Personal.—Rowan Whealdon, field secretary of the Oregon Tuberculosis Association, has been appointed executive secretary of the Cattaraugus County Tuberculosis and Public Health Association to succeed John Armstrong, who has been promoted to director, Bureau of Health Education of the Cattaraugus County Department of Health.

Health at Albany.—Telegraphic returns from sixty-nine cities with a total population of about 29,000,000 for the week ending May 8 indicates that the highest mortality rate (22.6) was for Albany, and that the mortality rate for the group of cities was 14.5. For the corresponding week last year the mortality rate for Albany was 16.4, and for the group of cities, 13.3.

New York City

Society News.—Dr. George E. Brewer addressed the West Side Clinical Society, May 13, on "Military Surgery."——Drs. Readie G. Snyder and Solomon Fineman will address the Medical Society of the County of New York, May 24, at the Academy of Medicine on "A Clinical and X-Ray Study of High Colonic Irrigations in the Therapy of Subacute and Chronic Arthritis."

Promotions at Columbia University.—Nicholas Murray Butler, president of Columbia University, announced, May 9, says the New York *Times*, the following promotions on the faculty of the College of Physicians and Surgeons: Drs. Louis Bauman, Henry T. Chickering, Robert L. Levy and I. Ogden Woodruff to be assistant professors of clinical medicine; Drs. George C. Andrews, Jr., and Abernethy Benson Cannon, to be assistant professors of dermatology; Dr. Hugh Auchincloss, to be professor of clinical surgery; Dr. William C. Clarke, professor of experimental surgery; Dr. Fordyce B. St. John, professor of surgery, and Dr. George M. MacKenzie, to be associate professor of medicine.

Promotions at Post-Graduate School.—At the recent annual meeting of the faculty of the New York Post-Graduate Medical School and Hospital, the following promotions were announced:

Dr. James L. Joughin, professor, department of neurology.
John A. Killian (Ph.D.), professor of biochemistry, department of laboratories.
Dr. Michael Osnato, professor, department of neurology.
Dr. John D. Stewart, professor of rectal diseases, department of surgery.
Dr. M. Uribe Troncoso, professor, department of ophthalmology.
Dr. Marvin F. Jones, associate professor, department of otology.
Dr. Jerome Selinger, associate professor, department of surgery.
Dr. Dudley D. Stetson, associate professor, department of dermatology.
Dr. Adolph Jacoby, assistant professor, department of gynecology.
Dr. Roy D. Duckworth, assistant professor, department of roentgenology.
Otto Glasser (Ph.D.), assistant professor of biophysics, department of roentgenology.

Tuberculosis Dispensaries.—Thirty-one tuberculosis clinics are included in the Association of Tuberculosis Clinics of the City of New York; nineteen of them are maintained by the city, four by the department of Bellevue and Allied Hospitals, and eight by various other hospitals, and the Brooklyn Tuberculosis Committee. At the recent annual meeting of the association, it was announced that 40,973 persons were examined during 1925, and of these 11,210 were found to be tuberculous. The clinics were instrumental in placing in hospitals and sanatoriums 2,755 patients, or 35 per cent of all the tuberculosis cases disposed of during the year. The visiting nurses of the clinic staffs cover every part of the city. There were 20,840 new patients admitted to the clinics in 1925. Dr. Louis I. Harris, health commissioner, was elected president of the tuberculosis clinics for 1926, and Dr. Max Taschman, vice president.

NORTH CAROLINA

Dean Kitchin Resigns.—Dr. Thurman D. Kitchin, since 1917 professor of physiology and pharmacology, and since 1919 dean at the Wake Forest College School of Medicine, Wake Forest, has tendered his resignation to the board of trustees, effective at the close of the present term. Dean Kitchin plans to return to his former home, Scotland Neck, to resume the practice of medicine.

Anti-Evolution League.—The North Carolina Anti-Evolution League has been chartered by the secretary of state with the avowed purpose of creating public sentiment which will prevent the teaching in schools of the state supported by public taxation of any theory of the origin of man which conflicts with the views of the members of the league; to promote its purposes, the league expects to raise $50,000.

Society News.—Prof. L. H. Snyder of the State College at Raleigh, who was guest of honor at a banquet given by the Wayne County Medical Society, Goldsboro, April 2, gave an address on "Human Blood Groups: Their Inheritance and Racial Significance."——Among the speakers at the May 11 meeting of the Sixth District Medical Society, Wake Forest, were Dr. Stuart McGuire, Richmond, Va., and William L. Poteat, president of Wake Forest College, who spoke on "The Trend of Modern Scientific Methods and Their Influence on Thought." Dr. Thurman D. Kitchin, Wake Forest was elected president of the society, and Dr. Burton W. Fassett, secretary.——At the semiannual meeting of the Tenth District Medical Society, Waynesville, May 5, Dr. Emanuel Libman, New York, gave an address; Dr. Watson S. Rankin, Charlotte, spoke on "The Need for Community Hospitals and the Aid to Be Given Free Beds by the Duke Endowment."——Dr. Andrew J. Crowell, Charlotte, addressed the New York Academy of Medicine, May 23, on "The Curve of Phthalein Excretion: Its Interpretation and Clinical Use."——Dr. Paul D. White, Boston, recently addressed the Mecklenburg County Medical Society, and was guest of honor at a dinner given by former fellow officers in the A. E. F.——Dr. Paul H. Ringer, Asheville, addressed the congregation of the Old Calvary Episcopal Church, Sunday, May 16, on "What Has Medicine to Do with Religion?"

OHIO

Summer Courses.—The University of Cincinnati College of Medicine announces that its summer courses will open, June 14, and continue for eight weeks; the courses to be given are biochemistry, physiology and bacteriology; all of them are of regular university grade, and full college credit will be given for the number of hours officially published with the course.

State Medical Election.—At the annual meeting of the Ohio State Medical Association, Toledo, May 11-13, Dr. Leora G. Bowers, Dayton, was elected president; Dr. Leslie L. Bigelow, Columbus, president elect; Dr. Herbert M. Platter, Columbus, treasurer, and Mr. Don K. Martin, Columbus, executive secretary, 131 East State Street, Columbus.

Classes for Crippled Children.—Twenty-one cities in Ohio have special classes for crippled children. According to the Ohio Society for Crippled Children, Ohio leads other states in home instruction, furnished for children who cannot be transported to the special classes. While New York has a larger number of classes for crippled children (114), 105 of them are located in New York City, and the only cities having such classes are Buffalo, Rochester and Binghamton; private agencies in New York maintain special classes in five other cities.

Personal.—Dr. William G. Rhoten, Logan Health Officer, Hocking County, has resigned, effective, June 1, to become the health officer of Wooster and Wayne County.——Dr. Robert H. Riley, assistant director, State Department of Health of Maryland, spent some time in Columbus investigating health administration in Ohio.——Dr. John P. Spooner, Toledo, recently presented thirty bound volumes of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION to the Library of the Academy of Medicine of Toledo and Lucas County.——Dr.

Dorsey W. Fellers, Bloomville, has been reelected a member of the Seneca County Board of Health for five years.

PENNSYLVANIA

Damage Suits Following Epidemic.—Nine residents of New Milford have brought damage actions, aggregating $170,000, against the New Milford Water Company, following the recent outbreak of typhoid in that village. According to the New York *Times*, there were eighty cases of typhoid fever and several deaths, and health officials declared that the source of the epidemic was in the water supply (THE JOURNAL, March 27, p. 961).

Distribution of Income from Frick Estate.—Judge Mitchell of Orphans Court, Pittsburgh, ordered the distribution of more than $1,000,000 to beneficiaries of the residuary estate of the late H. C. Frick, the sum representing income from the estate. Among the beneficiaries were various Pittsburgh hospitals and charitable and educational institutions; Princeton University receives $300,000; Massachusetts Institute of Technology, $100,000 and the Society of the Lying-In Hospital, $30,000.

County Public Health Associations.—The work of organizing county health associations in Pennsylvania is progressing satisfactorily; according to the state secretary of health, the plans now involve the organization of all the counties in the state before Dec. 31, 1926; Beaver, Bradford, Centre, Clearfield, Delaware, Erie, Lackawanna, Lawrence, Luzerne, Mercer, Northampton, Schuylkill and Tioga will be organized in the near future. The Allegheny Public Health Association recently held its second annual meeting in Pittsburgh, and the Bedford County Public Health Association recently held its second meeting. The county units are members of the state public health association, and are the means of standardizing and disseminating preventive and constructive health work throughout the state.

Society News.—Dr. Walter E. Dandy, Johns Hopkins Hospital, Baltimore, delivered the R. W. Stewart Memorial Lecture before the Pittsburgh Academy of Medicine, May 6, on "The Diagnosis and Localization of Brain Tumors."——The Women's Auxiliary of the Philadelphia County Medical Society presented a Steinway piano at the dedication of the society's new home in April; the directors of the medical society have assigned one room in the building for the use of the auxiliary.——Dr. Francis Carter Wood, New York, gave a postgraduate lecture before the Allegheny County Medical Society, Pittsburgh, May 27, on "The Blair Bell Lead Treatment for Cancer."——The Pittsburgh Ophthalmological Society gave a dinner, May 28, at the University Club in honor of Prof. Leonhard Koeppe of the University of Halle, Germany, who addressed the society on "Early and Differential Diagnosis of Several Forms of Cataract with the Slit Lamp."

Philadelphia

Personal.—Alba B. Johnson, former president of the Philadelphia Chamber of Commerce and for many years closely identified with Jefferson Medical College, has been elected president of that institution to succeed the late William Potter.

Prizes to Undergraduates.—The dean of the University Pennsylvania Medical School announced, May 2, that Eugene M. Landis, Philadelphia, for the third consecutive year had won the first prize for the best piece of research to be done by a medical student of the university; L. A. Rademaker, Tacoma, Wash., received second prize, and S. David Glusker, Brooklyn, received the third prize.

Society News.—Dr. Wilmer Krusen, director of health, was the guest of honor at the eightieth annual anniversary banquet of the Northern Medical Association, Philadelphia, Majestic Hotel, May 17.——Dr. Harold H. Marvin, Yale University Medical School, New Haven, Conn., addressed the Rush Society at the College of Physicians, May 18, on "Use and Choice of Diuretics in Cardiac Patients."——The Medical Club of Philadelphia held a reception at the Bellevue-Stratford Hotel, May 27, in honor of the surviving original members, of whom there are fourteen.——Dr. Frederick S. Baldi has been nominated as 1927 president of the Philadelphia County Medical Society, and Dr. Isidor P. Strittmatter, president-elect; Dr. Orlando H. Petty, vice president, and Drs. Henry G. Munson and Edward A. Shumway, secretary and treasurer, respectively, to succeed themselves; at this meeting the society voted to change the by-laws so as to permit the nomination and election of a president-elect, so that he may become familiar with the business of the society before induction into office.

TENNESSEE

State Medical Election.—At the annual meeting of the Tennessee State Medical Association, Memphis, May 11-13, Dr. Ernest R. Zemp, Knoxville, was elected president; Drs. Thomas B. Yancey, Kingsport, William F. Cannon, Fayetteville, and James L. Dunavant, Henning, vice presidents; Dr. John O. Manier, Nashville, treasurer, and Dr. Joseph F. H. Gallagher, Nashville, secretary-editor.

New Medical Organizations.—After many years of inactivity, the Warren County Medical Society has reorganized; Dr. Elbert L. Mooneyham, Rock Island, was elected president, and Dr. John S. Harris, McMinnville, secretary.——After five years of inactivity the Morgan County Medical Society has been reorganized; Dr. William E. Gallion, Oakdale, is secretary-treasurer.——The Giles County Medical Society has also been reorganized with Dr. James P. K. Blackburn, president; Dr. James A. LaRue, secretary, and Dr. George D. Butler, treasurer, all of Pulaski.

TEXAS

Society News.—Major Shelley U. Marietta, Medical Corps, U. S. Army, addressed the Bexar County Medical Society, recently, on "Indications for Surgical Procedure in Pulmonary Tuberculosis," and the discussion was opened by Lieut. Col. Raymond F. Metcalf, U. S. Army, stationed at Fort Sam Houston.

Hospital News.—An anonymous donor has given $75,000 to be applied on building a modern hospital for the negroes of Houston, the site for which has already been purchased. The gift will be supplemented by a gift from the city.——The contract has been let for the construction of the Fred Roberts Memorial Hospital at Corpus Christi, to cost about $60,000.

"Divine Healer" Convicted.—Mrs. Clyde Bell, Fort Worth, was found guilty of practicing medicine without a license by a jury, April 23, and sentenced to one hour in jail and a $100 fine, it is reported. The *Texas State Journal of Medicine* says that a patient testified that Mrs. Bell promised to cure a cancer of the breast by laying her fingers on the tumor; the patient was given some pills also and was charged $140.

WISCONSIN

Society News.—Dr. Clifford G. Grulee, Chicago, addressed the Milwaukee Pediatric Society at the Milwaukee Children's Hospital, April 14, on "The Intraperitoneal Transfusion of Citrated Blood in Anemia Pseudoleukemia, von Jaksch-Hayem Disease."

Personal.—Dr. John J. Bowes, assistant superintendent of the Central State Hospital for the Insane at Waupun, has resigned.——Dr. Charles Reineck has been elected chairman of the board of health of Appleton.——Arthur S. Pearse, Ph.D., professor of zoology, University of Wisconsin, has resigned to accept a professorship in Duke University, Durham, S. C.; Dr. Pearse is now on leave studying in the London School of Tropical Medicine.

Dr. Brown Resigns.—The State Board of Control of Wisconsin has accepted the resignation of Dr. John F. Brown as superintendent of the Central State Hospital for Insane, Waupun, who has been in poor health for some time. Dr. Brown, according to the *Wisconsin Medical Journal*, has been superintendent of this hospital since 1919, and has been associated with state institutions for twenty-three years, serving as superintendent of the school for the blind at Janesville, superintendent and physician at the School for Dependent Children at Sparta, and as physician at the state prison for seven years.

GENERAL

Pacific Northwest Medical Association.—This association will meet at Spokane, Wash., July 1-3, at the Davenport Hotel. Among the speakers will be J. B. Collip, Ph.D., and Drs. George W. Holmes, Boston; E. H. Mason, Montreal, Canada; Harry L. Parker, Rochester, Minn.; George Dock, Pasadena, Calif.; Arthur Steindler, Iowa City, and John Whitridge Williams, Baltimore.

Health Survey of Mexico.—Frederick L. Hoffman, LL.D., consulting statistician, Prudential Insurance Company of America, will leave New York, June 10, to make a comprehensive survey of health conditions and methods being used in Mexico to eradicate disease. Dr. Hoffman will be accompanied by two assistants, and after a study of the native Indian population in Arizona and New Mexico will begin the Mexican survey at Nogales, and then go to Guadalajara,

Mexico City, Vera Cruz, Yucatan, Oaxaca, the Isthmus of Tehuantepec, and possibly into Central America.

Questionnaires Deplored.—At the twenty-third annual meeting of Experimental Psychologists, held at the University of Pennsylvania, Philadelphia, April 5-7, a resolution was adopted as follows:

Resolved, That this meeting deplores the increasing practice of collecting administrative or supposedly scientific data by way of questionnaires; and

That the meeting deplores especially the practice under which graduat students undertake research by sending questionnaires to professional psychologists.

American Journal of Surgery Changes Publishers.—With the May issue, the *American Journal of Surgery* passes into the hands of Paul B. Hoeber, Inc., New York. The editor continues to be Dr. Walter M. Brickner, with whom will be associated a new editorial board. The publisher announces in the current issue a gradual elimination of advertising, except that which meets the standards of the Council on Pharmacy and Chemistry and the Council on Physical Therapy of the American Medical Association. The publisher also announces an increase in the size and improvement in typography. Special attention will be given to general industrial and traumatic surgery, anesthesia and physical therapy.

Directory of Otolaryngologists.—The American Board of Otolaryngology has just issued a directory of those physicians who have successfully passed the examination and received their certificates which signify that the holders are, in the minds of the board, duly qualified to practice in the field of otolaryngology. In the directory of the American Medical Association, there are more than 6,000 physicians who are endeavoring to specialize in the field of otolaryngology. Most of these are general practitioners who have had no special preparation and could not receive the certificate from the American Board of Otolaryngology. The directory which has just been issued by the board will assist physicians, as well as patients, in finding out what men in the various centers have had the preparation that qualifies them to practice in this field.

Smallpox in 1925.—Reports received from state health officers by the American Association for Medical Progress indicate that more smallpox was reported in the United States during 1925 than in any other country except India. The total number of cases reported was 43,193, which is an improvement over the preceding year, when the total number was 56,351. While most of the states did not report whether the patients had been vaccinated or not, this fact was reported for most of the cases from seventeen states and the District of Columbia, and among 10,636 cases so reported, 9,660 of the patients had never been vaccinated, and 751 had been vaccinated from seven to fifty years previously. Thirteen states each reported more than 1,000 cases of smallpox in 1925, California leading the list with 4,921; Alabama was second with 4,288, and Ohio third with 4,018. The six New England states altogether had only 102 cases, ninety-four of which were in Rhode Island.

Society News.—At the annual meeting of the American Radium Society, Dallas, Texas, April 19-20, Dr. Albert Soiland, Los Angeles, was elected president; Dr. Curtis F. Burnam, Baltimore, president-elect; Drs. Burton J. Lee, New York, and Edward H. Skinner, Kansas City, Mo., vice presidents; Dr. Edwin C. Ernst, St. Louis, secretary, and Dr. Sanford M. Withers, Denver, treasurer.——The American College of Physicians will hold its eleventh annual clinical congress at Cleveland the week of Feb. 20, 1927. Further details may be obtained by writing Mr. E. R. Loveland, executive secretary, c/o The Covington, Thirty-Seventh and Chestnut streets, Philadelphia; Dr. John Phillips, Cleveland, has been elected general chairman of the congress.——At the annual meeting of the American Association of Genito-Urinary Surgeons, May 12, Dr. James A. Gardner, Buffalo, was elected president, and Dr. William C. Quinby, Peter Bent Brigham Hospital, Boston, secretary. The next annual session will be at Atlantic City.

Bovine Tuberculosis Decreasing.—The percentage of tuberculous cattle in the United States decreased from 4 per cent in 1922 to 2.8 per cent in 1926, according to a survey completed, May 1, by the U. S. Department of Agriculture. This has been brought about by cooperation between federal, state and county forces, and indicates that by 1936 about 31 per cent of the country will have reduced the percentage of bovine tuberculosis to less than 0.5 per cent. The proportion of diseased cattle now varies from more than 23 per cent in some counties to less than 0.5 per cent in others. Most of the infection is confined to a comparatively small area, about 73 per cent of the reactors yet to be condemned being in 411 counties; the other 27 per cent of diseased cattle are scattered throughout the remaining 2,658 counties, where the average infection is less than 3 per cent. The department of agriculture states that it is comparatively easy, when funds are available, to free any county of bovine tuberculosis which has less than 3 per cent infection, and that the problem is one of proper initial testing and sufficient quarantine measures to protect against reinfection.

FOREIGN

Tax Stays on Nobel Fund.—The Swedish Parliament has rejected a proposal to remove the tax from the Nobel Prize Fund, which, according to *Science*, was made by members of all political parties. Sweden has had, from the beginning of the fund, an income from this tax of 10,900,000 crowns; last year, it is said, the tax was higher than the prize sum given in that year.

Berlin Charlatan Goes to Prison.—The Potsdam court has sentenced to four years' imprisonment a drugless practitioner, a former mechanic, on account of the death of a girl in diabetic coma after he had been treating her for eighteen days. She had been treated in a sanatorium and had been instructed to keep up the insulin treatment, but the charlatan told her to eat sugar, honey and other sweets instead, which induced fatal coma on the sixteenth day. The state prosecutor had asked for a penalty of two and a half years' imprisonment but the court imposed four years. The case is described in the *Deutsche medizinische Wochenschrift* **52**:370, 1926.

Strike at Canton Hospital.—The South China Branch of the China Medical Association unanimously adopted a resolution, April 8, protesting against the inhuman action of the Miscellaneous Workers Union, which ordered all workers of the Canton Hospital, Canton, China, to leave their work and the hospital premises, and caused the hospital gates to be picketed, preventing Chinese patients and others from entering the hospital, preventing food being taken into the hospital for Chinese patients and staff, and cutting the water and telephone services. When this resolution was passed, the pickets were still at all the gates of the hospital armed with clubs. The Canton Hospital, the resolution says, introduced modern medicine into China, and for ninety years has served the community as a charitable medical institution.

Personal.—Prof. M. Couto, president of the Brazilian Academy of Medicine, was tendered a reception by the French Académie de médecine at Paris. He presented the president, Professor Bar, with the diploma appointing him an honorary member of the Brazilian organization, with the symbolic collar, and address of tribute from the Rio Academy. He also delivered an address on "The Syndrome of Perforation of the Aorta."——The radiologist of the Bretonneau Hospital, Paris, M. Lobligeois, has had an arm amputated, the fourth operation since 1925 for professional injury. Dr. G. Piana, radiologist of the Genoa public hospital, is another victim of radiologic professional injury, requiring amputation of the left arm.——The conference on physical training and school hygiene of the Northland is to meet at Copenhagen in August. Dr. H. P. T. Ørum is in charge of the arrangements.——Dr. E. Roesle, Berlin, has been appointed a member of the international committee for standardizing vital statistics. The next revision of the nomenclature is to be made in 1927, and the work is already under way.——Dr. Albert Grotjahn, Berlin, professor of social hygiene, has been appointed corresponding member of the League of Nations' committee for educating the public in hygiene.——Prof. L. Morquio, Montevideo, delivered an address at Paris on "Hydatid Cysts in the Lungs in Children." He was the delegate from Uruguay to the recent International Child Welfare Congress at Geneva.

Deaths in Other Countries

Dr. **John William Smith**, emeritus professor of surgery, Victoria University of Manchester, England, April 13, aged 61.——Dr. **T. Wyder**, professor of gynecology, Zurich, author of an "Atlas for Gynecologic Examination" and other works, aged 72.——Dr. **K. Reifferscheid**, professor of gynecology, Göttingen, aged 53.——Dr. **Jules Glover**, Paris, the laryngologist of the Conservatoire de musique, whose application of electric auscultation to different parts of the body has proved useful in aviation.——Dr. **F. Lentz**, Tournai, formerly president of the Belgian Académie de médecine, aged 86.——Dr. **M. Henseval**, professor of bacteriology at Ghent, aged 52.——Dr. **Carl Ruge**, Berlin, aged 79, author of a "Manual of Gynecologic Diagnosis."——Dr. **Bartolome Podesta**, Buenos Aires, was shot and killed, May 11, by an unknown assailant.

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 8, 1926.

Death of Dr. Axham

Dr. Axham has died at the age of 86. He had been in failing health for some time. His name was removed from the Medical Register in 1911 because he acted as anesthetist to Mr. Barker the bone-setter, and because he refused to discontinue this service. When the honor of knighthood was conferred on Mr. Barker, it was widely felt by the public that Dr. Axham should not longer remain under the ban of his profession, many of the most prominent members of which had publicly expressed their admiration of Sir Herbert Barker's work. An effort therefore was begun to induce the general medical council to reconsider its decision. This attracted the widest public attention and assumed, in a short time, the dimensions of an agitation. The general medical council, however, declared that it was powerless in the matter. Dr. Axham's professional qualifications, which entitled him to registration, had been removed. In this impasse, his supporters turned to the Royal College of Surgeons, but this body refused to listen to them. The Royal College of Physicians of Edinburgh, however, of which body Dr. Axham had been a licentiate, gave him back his license. Then a further appeal to the general medical council was made, and it was urged that a special meeting should be called to consider the Axham case. This request was refused. The case was set down for hearing in the coming summer session of the council. As might be expected from the previous reports in THE JOURNAL on the case, Dr. Axham's death has aroused general sympathy in the lay press and criticism of the general medical council, which on the whole is moderate. The *Times* says: "The Axham case is now closed, and the opportunity which the general medical council had of performing a singularly attractive act of grace has gone. But the public issues raised by this case still remain. At the time when his name was removed from the medical register, Dr. Axham addressed to us a letter in which he set forth clearly and in dignified language the reasons which had impelled him to give assistance to Mr. Barker. Dr. Axham, then nearing 65 years of age, was at great pains to satisfy himself, before he took the most momentous step of his life, that this step was in fact his duty. He paid forty-five visits to Mr. Barker's consulting room. He saw 'several kinds of joint injuries, deformities and displacements treated entirely by manipulation, such as is not practiced at any hospital in the metropolis.' His decision exercised an important effect in bringing to the notice of the medical profession the value of manipulative surgery. Other journals are less restrained and describe Dr. Axham as a 'medical martyr' and refer to a 'vendetta against an aged doctor even when he stood on the threshold of eternity.' A demand is made by several journals for the reconstitution of the general medical council. In its obituary notice the *Lancet* states that 'the medical profession had much sympathy with Dr. Axham in the late phases of the contentions around him, though quite aware that the criticisms directed against the general medical council were frequently erroneous.'"

Health of the Army

The importance of health among soldiers, whether on active service or under peace conditions, is emphasized by the publication of the Army Manual of Sanitation (1926), designed especially for regimental officers and other ranks. It is pointed out that a large proportion of the diseases of armies is preventable, and as a rule many more men are lost through disease than through enemy action. Though losses from disease are more acutely felt during a campaign than in time of peace, yet the waste of men's services in peace time through preventable disease is a serious matter to the army. A chapter of the manual is devoted to environment in relation to health, in which many points peculiar to the soldier are dealt with. For instance, it is stated that a man can carry a marching load equal to one third of his own weight without undue exertion, but any marked excess over this amount means that fatigue will set in rapidly and the increased work requires a greatly increased supply of food; and, again, a soldier in marching order may lose by perspiration alone nearly a quart of water during a march of 8 miles, even in a temperate climate. The chapter which deals with sanitary organization on active service states that the sanitary organization of an army in the field is based on three principles: First, the commander of every unit and formation is responsible for the sanitary condition of the quarters or localities occupied by his command; second, every commander has available a representative of the medical services responsible for giving advice and technical recommendations; and, finally, special sanitary personnel is provided in all units, formations and areas to supervise and carry out sanitary measures beyond the skill or training of the troops.

Drug Addiction

The prevention and arrest of drug addiction was dealt with by Sir William Willcox, in a presidential address before the Society for the Study of Inebriety. He said that drug addiction was not very prevalent in this country, but parts of the British empire were places where addiction drugs were being grown and produced, and in parts of the empire drug addiction was very prevalent. In America, drug addiction was a serious problem indeed, and it had been estimated that in the United States there were more than a million drug addicts, and in the city of New York 1.8 per cent of the population were addicts. Drug addiction is a disease rather than a vice, said Sir William, and, like other diseases, it is infectious. It is spread by psychotherapeutic methods, one person influencing another. Drug addiction is a real menace to the world, and it is necessary that Britain should play its part in the fight against it. We were immeasurably more successful in this country in controlling traffic in addiction drugs than were the Americans, and an enormous amount of drugs got to the public in America by illegal ways. It was important that members of the medical profession should realize that it was only in exceptional cases that morphine and such drugs should be prescribed, especially hypodermically. Other drugs should, if possible, be administered, and these dangerous drugs should never be employed for the relief of mental strain, worry, grief or distress.

Mild Outbreak of Influenza

A considerable, though mild, outbreak of influenza is in progress in most parts of the country. The type of the disease seems to be "gastric," and the symptoms complained of, in most cases, are headache, dyspepsia and lassitude. The condition tends to recur at short intervals, so that some of the victims are ill over several weeks. This is the thirty-fourth week, calculating from the week beginning Nov. 12, 1921, that a sharp epidemic began. Season after season confirmation has been furnished of the observation of Dr. Brownlee that influenza shows a definite periodicity. So far, no explanation of this periodicity has been furnished.

Poison Dangers

Dr. Edwin Smith, lecturer on forensic medicine and toxicology at St. Thomas' Hospital, and coroner for northeast London, addressed a meeting of nurses and others at the

hospital and nursing conference on poisons. He said that had he been addressing a meeting of physicians he should have taken the opportunity of reminding them that, just as a hospital should have its poison cupboard, so the physician should have a properly equipped bag for use in case of poisoning. There was much laxity in the matter. Very few physicians, he declared, were prepared for adequate attendance on cases of poisoning. They simply relied on finding what they wanted when they got to the patient and, while usually prompt in administering an emetic, they also showed a surprising want of care or knowledge in following up the treatment with the proper antidote. That was a somewhat serious criticism, but it was based on accurate knowledge of the conditions of medical practice both in London and elsewhere. Nurses, he said, had been led into error, through mistaking the symbols used in physicians' prescriptions, and in a badly written prescription the symbol for a drachm might easily be mistaken for that of an ounce. The present poison regulations were drastic in one sense but very unsatisfactory in another. No one could get from a pharmacist a hundredth of a grain of arsenic except by a procedure hedged round with safeguards against accident and crime. But such poisons as spirits of salt and salts of lemon could be sold at an oilshop, even to a child, without hindrance. Further, the bottle or package in such cases was required to be labeled "Poisonous," a word which surely tended to mislead by suggesting something of lesser virulence hardly calling for the more definite name of "Poison."

The Uses of Radium

The effects of the uses of radium on malignant and non-malignant diseases in nine research centers during 1924 is summarized in a pamphlet just issued by the medical research council. Five of these centers are in hospitals in London, and the other four are in hospitals at Birmingham, Cardiff, Aberdeen and Dublin. The experiments have been carried out with a stock of radium salt which had been collected for military purposes during the war. Further quantities of radium salt had been provided by the British Empire Cancer Campaign, while the same organization is defraying the expenses of supplying radon from the center at the Middlesex Hospital.

With regard to cancer in the breast, it is stated that radium has a definite therapeutic value; local recurrences, treated by the method of surgical insertion, are often held in check, and may sometimes disappear after the use of comparatively large doses of radium. For cancer of the uterus, a palliative radium treatment has proved of great value. Hemorrhage ceases in nearly all of the cases, the local growth disappears in a large percentage, the patients feel better and put on weight, and in many instances life is prolonged. The histologic evidence proves that where the growth is localized, the malignant cells have in certain cases been completely destroyed. The value of radium therapy in malignant growths of the mouth, nasopharynx, larynx and esophagus is stated to be intimately bound up with the technic adopted. The irradiation of tumors in these sites by numerous, though weak, radium sources, applied for a long time, is a hopeful development, but results on a larger number of cases are needed before any definite conclusions on this technic can be reached. Another conclusion drawn is that radium therapy is effective in a large porportion of rodent ulcers. There is, however, a tendency for recurrence. In cases in which there has been a recurrence of activity of the cells at the surface of the growth, this points to unusual resistance of such cells to irradiation.

Roentgen-Ray Martyr Honored

Major J. Hall-Edwards, the Birmingham radiologist, has been elected honorary life member of the British Medical Association. Dr. Hall-Edwards has had his left hand and forearm and the four fingers of his right hand amputated as the result of dermatitis. Recently he has suffered from recurrent heart attacks, but he continues to take an active interest in public life as a member of the Birmingham city council.

The Journal of Neurology and Psychopathology

The British Medical Association has decided to publish the *Journal of Neurology and Psychopathology*, which has existed since 1920 and was started to take the place of the former *Review of Neurology and Psychiatry*, a valuable periodical that ran from 1903 to 1918. The aim of this journal has been to supply abstracts and reviews covering the whole field of neurology and psychopathology, for which the need is felt by workers in those subjects. The editor is Dr. S. A. Kinnier Wilson. The *Journal* is a quarterly and the annual subscription is $7.50, for which orders should be sent to the financial secretary, British Medical Association, Tavistock Square, London, W. C. 1.

GENEVA

(From Our Regular Correspondent)

May 5, 1926.

Hydrocyanic Acid in Shoe Cleaning Preparations

By a circular of March 23, 1926, the federal department of public health states that recently preparations containing hydrocyanic acid have been on sale for cleaning silver and brocade slippers. The sale of these dangerous products is prohibited by article 38 of the Swiss federal law relating to foodstuffs and various ordinary preparations for household use, and the public is therefore warned against their use.

Tuberculosis Control in Denmark

J. Ostenfeld and G. E. Permin have presented a detailed report on the control of tuberculosis in Denmark to the Swiss federal department of public health. The state pays from three fourths to five sixths of the cost of treatment. The question of payment never excludes tuberculosis cases from any of the establishments mentioned by law. The public charities maintain the family during the treatment of its wage earner. Patients are clad and transported at the expense of the municipality. The expenses of state recognized anti-tuberculosis dispensaries are met, one third by the state, one third by the municipality and one third by private initiative. Besides economic measures, the law covers a number of prophylactic and sanitary measures, such as reporting of cases of pulmonary or laryngeal tuberculosis and reporting of all deaths from tuberculosis. Furthermore, disinfection, isolation or hospital treatment may be ordered when necessary. In order to protect children, a wetnurse cannot be accepted unless she has a medical certificate specifying that she is free from tuberculosis; subjects with infective tuberculosis cannot be employed in any institution where children are cared for. Private persons cannot take children to board unless provided with a medical certificate showing that persons in the family are not affected with contagious tuberculosis. Children with infective tuberculosis are barred from public schools. The department of public instruction provides instruction for diseased children. Every teacher must be free from infective pulmonary or laryngeal tuberculosis. If a public employee contracts infective tuberculosis after being appointed, his case is investigated, and if he is discharged he receives an annuity equivalent to two thirds of his salary. The law excludes subjects with tuberculosis from bake-shops and confectioners. Throughout Denmark there are stations for diagnosis where examination of the sputum is gratuitous.

Epitaph Prejudicial to Medical Profession

The civil court of Montpellier recently handed down a decision as follows: An epitaph injurious to physicians or the medical profession cannot be tolerated. The test case

was that of a man who lost his wife and accused Dr. P. Delmas, professor of obstetrics at Montpellier, of having caused her death. The husband had inscribed on a black stone in gold letters "Victim of the Professors," and this was placed over the vault in a little chapel. Learning this, Professor Delmas and the medical syndicate of Hérault conjointly sued the husband. The court ordered the husband to remove the words "Victim of Professors" within one month, and if he did not comply within this time to pay twenty francs ($0.65) daily until the removal of the words. The court also ordered the husband to pay one franc to Delmas and 500 francs ($16) to the syndicate, as well as costs of the trial.

Trial of a Quack

In La Chaux-de Fonds (Switzerland) a Russian woman pretended that she possessed special power at the finger tips, similar to radium, and could cure certain diseases. Some witnesses stated that they had been improved after the healer had placed her finger tips on them. The healer did not exact a fee, but accepted presents. She prescribed no remedy, her mere personal fluid being enough to work a cure. She was found guilty of the illegal practice of medicine.

Case of Lipodystrophy

A case of progressive lipodystrophy in a boy, aged 10 years, has been in the university clinic of Geneva. As pointed out by Professor Roch, this case is interesting in several ways. In the first place the onset was only one year ago. The affection evolved very rapidly because when the patient was first seen the picture was nearly complete. On the other hand the picture was not perfect. Although the fat atrophy of the upper half of the body was practically complete, the fat hypertrophy of the lower part of the body was incomplete, the amount of fat being hardly greater than normal. The patient presented a distinct polymicro-adynia. There is no clear pathogenesis but it is possible that the involvement of the lymphatics had played a part in the development of the progressive lipodystrophy. The patient had quiescent tuberculosis, which had attacked the lymphatics and probably also the endocrine glands, whose part in disturbances of growth and metabolism is now recognized. Of late, it has been shown that the lymph nodes and lymphocytes throw a lipolytic ferment into the circulation—a lipase—the function of which in fat transformations is not fully elucidated. For this reason Professor Roch stressed the coincidence of a disturbance in the distribution of the subcutaneous fat and the general involvement of the lymphatic system.

RIO DE JANEIRO

(From Our Regular Correspondent)

April 15, 1926.

Treatment of Lupus

Dr. Alvaro Alvim states that the alleged new cure for lupus reported by Dr. Auregan to the French Dermatological Society is far from new. This treatment consists of a deep scraping followed by applications of potassium permanganate. While the method cures, says Alvim, he does not use it as it is too painful and antiplastic. Alvim reports that he has cured all his patients, using first ultraviolet rays or Finsen light, followed by embrocations with a freshly prepared potassium permanganate solution. Sometimes the tubercles on the surface are burned with the actual cautery. Radiotherapy destroys all traces of the disease.

Spider Venom

In the second volume of *Memorias do Instituto Butantan*, Drs. Vital Brazil and J. Vellard have a long article on the poison of spiders. They studied five different species: *Ctenus ferus*, Perty; *Ctenus nigriventer*, Keys; *Trechona venosa*, Latr.; *Nephila cruentata*, Fabr., and *Lycosa raptoria*, Walck. With direct bites, the results are variable, according to the condition of the spider, the temperature and other factors. To obviate this uncertainty, several solutions of the poison were prepared. These yielded results somewhat less active than those secured with bites. With a dry poison treated with saline solution, the results came closest to those of natural poison. The venoms of *Ctenus ferus* and *Ctenus nigriventer* are very active and affect exclusively the nervous system. On the contrary, that of *Nephila cruentata* is rather weak, and its action is purely local. The venom of *Lycosa raptoria* acts also only locally but is very potent. This spider is incriminated in the necrosing arachnidism cases reported at São Paulo.

Certain neurotoxic spider poisons possess an activity comparable to that of the strongest snake venoms; on the other hand, others cause only a more or less extensive local necrosis. Practically all those studied (more than twenty species) failed to exhibit any lytic action on blood cells, as well as any proteolytic or coagulating effect.

In any case of bites by poisonous spiders, specific serum therapy should be used. It is possible to prepare a very active serum against spider venom. The serum of a sheep that had received for two weeks daily injections of *Ctenus ferus* neutralized an appreciable quantity of this poison. A very active serum against the poison of *Lycosa raptoria* was obtained by a similar method. These serums are strictly specific and do not protect against other species. Likewise, snake or scorpion antiserums are useless against spider venom. It proved difficult to study the neutralizing action of the blood serum of spiders on their own serum. A 0.1 cc. dose of serum proved ineffectual; a 0.5 cc. dose was strongly toxic. The symptoms caused by the blood serum of several species of spiders were identical, but each poison acted differently.

Spider poisons are stable at low temperatures. They begin disintegrating at 65 C., but total destruction takes place only at 100 C. They are also resistant to the various chemical agents used for attenuation. The most active substances are potassium permanganate (1 per cent solution) and tenth normal solution of sodium and ammonia (25 per cent). Sodium thiosulphate (50 per cent), chromic acid and ammonia (1 per cent) proved rather ineffective.

Artificial Pneumothorax

Dr. Ary Miranda has discussed the immediate results of pneumothorax in tuberculosis of the lung. This method was used in 117 cases treated at the tuberculosis division of the public health department. In twenty cases, the process proved impracticable, because of pleural involvement; in twelve it had to be abandoned, as the collapse proved inadequate; in seventeen, lesions appeared in the opposite lung; eighteen patients refused to continue the treatment, and one died after the pneumothorax failed to stop the downward course. In the remaining forty-nine, the method modified favorably the symptoms, and even permitted the patients to return to their former occupation. It is interesting to observe that the air hunger so prevalent among tuberculous patients is a reflex phenomenon and not the direct result of the decreased breathing surface.

Late Localized Tetanus

Dr. Americano do Brazil has reported a case of late local tetanus with pleurothotonus treated in the Army Central Hospital. The patient, after a bullet wound in the left hip, received the usual antitetanic injection. Two months and ten days afterward, he developed tetanus symptoms localized in the wounded part. The patient finally recovered after receiving 657 cc. of serum. Trismus, nuchal rigidity and abdominal muscle reactions were transitory, the predominant symptom

consisting in contractions in the left lower extremity. According to Lumière and Courtois-Suffit, there has not been so far a single case of local tetanus with traces of pleurothotonus.

Cholecystography

Dr. Manuel de Abreu presented to the Society of Medicine and Surgery the first report prepared here on cholecystography. His records showed graphically that after an injection of tetrabromphenolphthalein in normal subjects, the gallbladder casts as clear a shadow as the stomach after an injection of bismuth. Dr. de Abreu also showed the roentgenograms as well as the surgical specimen in a case of calculus impacted in the cystic duct. Graham-Cole's test had been negative; i. e., the gallbladder was invisible.

ITALY

(From Our Regular Correspondent)

April 15, 1926.

A Series of Lectures on Neoplasms

Under the auspices of the Istituto sieroterapico of Milan, a series of lectures on neoplasms will be held in that city, from April 12 to May 14. At the same time, Professor Rondoni will deliver a course of lectures on endocrine pathology. There will also be a theoretical and practical course in immunology and serodiagnosis, occupying two weeks in May.

Italian Colonial Medicine

In an open letter, directed to the prime minister, Professor Sangiorgi of the University of Parma emphasizes the need of a genuine Italian colonial medicine, which today does not exist. No one has been assigned the official task of studying the medical geography of the various regions that make up our African possessions, nor the numerous types of diseases, of both man and animals, peculiar to the particular climates. Professor Sangiorgi proposes, therefore, that Italy should establish in its colonies special biologic institutes, provided with personnel and equipment, for the study of problems of colonial medicine, preferably of the type of the Pasteur institutes such as France has created in its colonies. As points of departure for the organization of such institutes might possibly be taken the present vaccination institutes existing in Eritrea (at Asmara) and in Italian Somaliland (at Merka). Others should be established at Tripoli, Derna and Rhodes (for the islands of the Aegean Sea).

Congress of the Italian Society of Neurology

The Società italiana di neurologia held its annual meeting at Turin, April 7-9, under the chairmanship of Senator Leonardo Bianchi. The congress comprised six sessions, during which numerous communications on the physiopathology of the nervous system were presented. It is the custom of the Society of Neurology not to have presented at its congresses official papers on subjects selected in advance. During the congress, special honors were shown to Prof. Eugenio Tanzi, occupant of the chair of mental and nervous diseases of the University of Florence, on the occasion of his becoming a septuagenarian. The day following, Professor Morpurgo presented to the conventionists Prof. Camillo Golgi, who had been counselor of the Società di neurologia since its foundation. Catania was chosen as the meeting place for the next congress.

League for the Promotion of Dental Hygiene

Founded in Turin, last October, with the object of promoting the care and prevention of dental caries, particularly in children, the Lega italiana per la propaganda d'igiena odontoiatrica scolastica has grown rapidly. In the schools, it has introduced a dental record card for the use of physicians entrusted with the medical examinations and to aid in the compilation of eugenic records. The league has induced dealers in school supplies to print maxims of dental hygiene on tablets and composition books, and has had made and distributed a type of toothbrush specially adapted for children. The league has appointed certain Italian stomatologists as its representatives in various provinces. It plans also to commission Drs. Rivano and Marangoni to deliver at Turin a series of lectures on the anatomy, physiology and pathology of the dental apparatus, with especial reference to children.

The Death of Giuseppe Gradenigo

The death of Prof. Giuseppe Gradenigo, director of the otorhinolaryngologic clinic at the University of Naples, has been announced. Professor Gradenigo was born in Venice in 1859. He carried out important researches on the embryology of the ear. He is the author of approximately 400 articles, treatises and books. His researches on familial deafness, experimental phonetics, telephonic acoumetry and otic acoumetry are likewise valuable. In 1889, he founded, in collaboration with Professor De Rossi of Rome, the monthly review *Archivio italiano di otologia, rinologia e laringologia.* During the war, he held the rank of lieutenant colonel, devoting much of his time to the study of methods of selecting air pilots. He was the recipient of many honors at home and abroad.

BERLIN

(From Our Regular Correspondent)

April 17, 1926.

The Congress of Internal Medicine

The annual session of the Deutsche Gesellschaft für innere Medizin was held in Wiesbaden, April 12-15, under the chairmanship of Professor Pässler of Dresden. The three main topics presented during the first three days of the session dealt with (1) the therapy of neurosyphilis; (2) the blood as a reflector of somatic processes, and (3) the pathology and therapy of asthma. The remaining papers or addresses (around 110) either treated subtopics of the main themes or were concerned with diseases of the nervous system, of the heart and kidneys, or of metabolism.

TREATMENT OF NEUROSYPHILIS

The papers on therapy of neurosyphilis were presented by Professor Spielmeyer of Munich and Professor Wagner-Jauregg of Vienna. Spielmeyer discussed, more particularly, theoretical researches on treatment of neurosyphilis. In neurosyphilis, tabes and general paralysis occupy a distinct position. They are not mere syndromes within the limits of neurosyphilis. The possibility of arrest of tabes can be demonstrated anatomically. In general paralysis, the clinical term "stationary" is not usually justified anatomically, since the process continues to develop, although possibly imperceptibly. There have been perhaps a few cases in which a cure with defect could be demonstrated. The histologic picture in the cases of general paralysis in which malaria inoculation has proved successful resembles the findings in the cases of paralysis that have become spontaneously stationary. The principle involved in this method has not been cleared up as yet by the anatomic findings. A special causative agent might, according to laboratory experiments, constitute an obstacle to specific therapy (Ehrlich's trypanosome studies, etc.). Various strains of spirochetes occur. There is also evidence of an early but not of a late neurotropy. The theory that antisyphilitic treatment tends to produce neurosyphilis needs to be more definitely established before conclusions can be drawn. The assumption that, in therapeutics, the spinal fluid-blood barrier constitutes the chief obstacle appears doubtful. Other factors may come into play; for instance, peculiarities of the organism, or the breakdown of defense forces. Wassermann's proposals that the process be imitated that presumably takes place in the therapy of secondary

syphilis have not proved successful. Laboratory experiments have given no insight into the question of the breakdown of the defense forces of the organism. They have not revealed failure of important blood functions, nor loss of capacity for phagocytosis. Attempts to prove weakness of the defense forces from the histologic picture also have failed.

Professor Wagner-Jauregg discussed the modern treatment of neurosyphilis. All treatments act for the most part by stimulating the defense forces of the organism against syphilis. The tuberculin-mercury procedure was instituted in 1900. Numerous remissions of the disease were thereby effected, but in the majority of the cases the improvement was not permanent. The same is true of other treatments, such as the use of vaccines and protein bodies. These experiences led to the treatment of general paralysis by inoculation with malaria (1917). Malaria inoculation should always be combined with other treatment. Recurrences have been noted, but these can doubtless be controlled by more intensive treatment. Retrogression of the disease symptoms and improvement in serologic reactions do not at first run parallel. But, later on, if the remissions become permanent, there is gradual improvement in those reactions as well.

The malaria treatment may be used prophylactically in persons who are threatened with general paralysis. African recurrent fever, as introduced by Plaut and Steiner in the treatment of general paralysis, acts in a manner similar to malaria. However, malaria inoculation produces more remissions than recurrent fever. Treatment by malaria inoculation is not dangerous for the environment, provided gametefree malaria strains are employed. Malaria caused by the bite of the mosquito is not to be recommended, as it is not as susceptible to quinine as is inoculation malaria. The restorative process that follows malaria inoculation or recurrent fever is worthy of intensive study. In tabes as well, especially in the preataxic stages, the treatment by malaria and recurrent fever is effective. In remotely latent cases with persistently positive spinal fluid findings, the treatment as introduced by Kyrle is particularly indicated. Possibly, too, Kyrle's malaria treatment of secondary syphilis has justification.

PRAGUE

(From Our Regular Correspondent)

May 1, 1926.

Institute for Histology and Embryology

The new building of the institute for histology and embryology was opened, April 16, at the Czech Medical Faculty of Prague. In the same building the institute for pharmacology and pharmacognosy will be located. The increasing number of both native and foreign medical students has made it imperative to increase teaching facilities. The construction of the institute was started in June, 1923. The institute for embryology and histology is divided into two parts: one for teaching and one for research. The students' part of the building contains the J. E. Purkinje amphitheater, with 331 seats. Each seat has a small electric lamp which can be used when the amphitheater has been darkened for projections. The Prenant lecture room for eighty students, a seminar room for thirty-four students, an examining room and two laboratories for microscopy, each containing seventy-five seats, complete the teaching part of the institute. The large museum was dedicated to O. Hertwig. The scientific part of the institute is centered about the library. On both sides of the library are laboratories and offices. There are laboratories for photomicrography, drawing, photography, construction of models, microchemistry, neurology and tissue culture. There are also a couveuse, an aquarium and a terrarium. In the basement are a large dissecting room, an operating room for experimental animals, a room for the conservation of preparations, a refrigerating machine and a mechanical workshop. Provision is made for ten workers who are not the members of the staff but who wish to work out clinical problems by laboratory methods. In 1928 the International Congress of Anatomists will be held in the institute.

Anniversary of Ivan Honl

Prof. Dr. Ivan Honl of the Czech Medical Faculty in Prague celebrated his sixtieth birthday, April 23. Having started his work in a single small room in the institute of Professor Hlava, he gradually developed his laboratories into a modern bacteriologic institute. Many papers bear his name. He was the first to demonstrate the effects of *Bacillus pyocyaneus* on suppurative processes. During the war he organized the epidemiologic service in his institute, and not only carried out the diagnostic work but also produced serums and vaccines.

Death of Friedl Pick

Prof. Dr. Friedl Pick of the German Medical Faculty in Prague died in Prague, April 7. He published many papers in the field of internal medicine. Pericarditic pseudocirrhosis of the liver is known as Pick's disease. On account of inherited wealth he was able to give his entire endeavors to the public. Many poor were among his patients. His papers, such as "Jesenius," are of interest to students not only of medical but also of general history.

Clinic for Study of Diseases of Old Age

At the Czech Medical Faculty of Prague, a clinic for study of diseases of old age was opened recently under the direction of Prof. A. Eiselt. The clinic is the outgrowth of a feeling that there is a special pathology of old age as there is of childhood. According to Professor Eiselt's introductory lecture, two groups of diseases of old age must be studied at the clinic: diseases that are specific for old age and ordinary diseases that present a different clinical picture when occurring in old age. The clinic is of special interest to the Czechoslovak republic because of old age and invalidity insurance, which will be put into force, July 1. The clinic has an outpatient department and eighty-three beds equally divided between the sexes. The staff comprises two medical assistants besides the chief of clinic.

Directory

The Central Society of the Czechoslovak Physicians, which comprises all physicians of Czechoslovak nationality in the republic, has issued its directory. The society has obtained addresses of 4,539 Czechoslovak physicians, of whom 3,790, or 83.49 per cent, are regular members. There are about 8,000 physicians in the Czechoslovak republic, of whom 7,500 are practicing medicine. With a population of 13,500,000, this makes an average of one physician to 1,800 of population.

Tuberculosis Mortality

The figures for tuberculosis mortality in the Czechoslovak republic for the years 1923 and 1924 have been published. For all forms of tuberculosis the mortality for the country as a whole for 1923 was 190.2 per hundred thousand; for 1924, 190.05. The slight decrease is due chiefly to the statistics of pulmonary tuberculosis, while the mortality from other forms of tuberculosis remained almost constant. The decrease in tuberculosis mortality is limited to the western half of the Czechoslovak republic. The figures indicate that the western part of the republic, which is industrially developed, has passed its tuberculinization period and is building up a racial immunity coupled with an intensive campaign against tuberculosis. In the eastern part of the republic, where, until recently, the population lived under purely rural conditions, tuberculosis is spreading.

Marriages

DANIEL W. WHEELER, Duluth, Minn., to Miss Della Hinshaw of River Forest, Ill., in April.

HUGH COTTER BOYLE, Philadelphia, to Miss Evelyn A. Mallen of Conshohocken, April 10.

JAMES MARSH M. ALESBURY to Miss Mary C. Sullivan, both of Philadelphia, April 24.

VICTOR F. CULLEN, Sabillasville, Md., to Miss Ethel Bell of Texas, May 19.

Deaths

Byron Clary Darling ✠ New York; Medical School of Harvard University, Boston, 1903; member of the American Roentgen Ray Society and the Radiological Society of North America; assistant demonstrator of anatomy, Cornell University Medical College, 1903; formerly instructor in clinical orthopedic surgery, Columbia University College of Physicians and Surgeons; on the staffs of the Knickerbocker Hospital, 1904-1906, Lying-In Hospital, 1906, Bellevue Hospital, 1908-1910, St. Vincent's Hospital, 1909-1919, Ruptured and Crippled Hospital, 1912-1919, and St. Mark's Hospital, 1914-1925; aged 50; died, May 9, of pneumonia.

Edward Hickling Bradford ✠ Boston; Medical School of Harvard University, Boston, 1873; member of the American Surgical Association; formerly professor of orthopedic surgery and dean at his alma mater; on the staffs of the Children's Hospital, 1878-1909, and the Boston City Hospital, 1880-1894, author of "Treatise on Orthopedic Surgery"; aged 77; died suddenly, May 7, of heart disease.

Alexander N. Stark ✠ Colonel, U. S. Army, retired, Los Angeles; University of Virginia Department of Medicine, Charlottesville, 1892; was appointed assistant surgeon in the army in 1893 and retired with the rank of colonel, August 26, 1925, on account of physical disability; awarded the Distinguished Service Medal for his work during the World War; aged 56; died, May 8, at Hollywood, of angina pectoris.

Edward Hiram Abbott ✠ Elgin, Ill.; Rush Medical College, Chicago, 1895; Spanish-American War veteran; for many years member and at one time president of the board of education; on the staffs of the Sherman and St. Joseph's hospitals; aged 59; died, April 12, following a long illness.

Lafayette Wallace Case, Colorado Springs, Colo.; Rush Medical College, Chicago, 1870; formerly lecturer in chemistry and dermatology at his alma mater; at one time on the staff of St. Joseph's Hospital, Chicago; aged 80; died, March 26, at Pasadena, Calif., of heart disease.

Alexander Douglas Wallace Kay, Detroit; University of Toronto Faculty of Medicine, Toronto, Ont., Canada, 1911; member of the Michigan State Medical Society; served during the World War; aged 38; died, March 13, at a local hospital, of pleurisy.

Jirah H. Kellogg, Sterling, Colo.; University of Colorado School of Medicine, Denver, 1906; member of the Colorado State Medical Society; aged 54; died, April 17, of an overdose of a scopolamine-morphine mixture, self-administered for relief of pain.

Thomas F. McGlasson, Lewistown, Mo.; College of Physicians and Surgeons, Chicago, 1886; member of the Missouri State Medical Association; past president of the Lewis County Medical Society; aged 64; died, May 3, at the State Hospital, no. 1, Fulton.

William Graham Painter, Big Stone Gap, Va.; Medical College of Virginia, Richmond, 1901; member of the Medical Society of Virginia; aged 50; died, April 22, at the George Ben Johnston Memorial Hospital, Abingdon, of coronary thrombosis.

Charles E. Jenkins, Lynn, Mass.; Dartmouth Medical School, Hanover, N. H.; 1881; member of the Massachusetts Medical Society; one of the founders and formerly on the staff of the Union Hospital; aged 70; died, April 23, of heart disease.

Marion Herbert McGuire ✠ New Orleans; Medical Department of the Tulane University of Louisiana, New Orleans, 1898; formerly instructor of anatomy at his alma mater; Spanish-American War veteran; aged 52; died, May 6.

Joseph Martin, Philadelphia; Jefferson Medical College of Philadelphia, 1878; member of the Medical Society of the State of Pennsylvania; for eight years member of the city council; aged 77; died, May 1, of heart disease.

Wilbur Gleason Ruble ✠ Morristown, Tenn.; Kentucky School of Medicine, Louisville, 1904; past president of the Hamblen County Medical Society; served during the World War; aged 52; died, April 27, of heart disease.

Hyman M. Folkes ✠ Biloxi, Miss.; Medical Department of the Tulane University of Louisiana, New Orleans, 1893; past president of the Harrison-Stone County Medical Society; aged 55; died, May 1, of cerebral hemorrhage.

Tarley William Jones, Fayette, Ala.; Vanderbilt University Medical Department, Nashville, Tenn., 1900; member of the Medical Association of the State of Alabama; aged 51; died, April 16, of pneumonia, following influenza.

Samuel Gibson Mugrage, Denver; Gross Medical College, Denver, 1895; formerly lecturer on clinical ophthalmology and otology and demonstrator of anatomy at his alma mater; aged 73; died, April 13, of heart disease.

Horace Clay Martindale ✠ Pendleton, Ind.; Physio-Medical College of Indiana, Indianapolis, 1907; served during the World War; aged 45; died, May 4, at the Methodist Hospital, Indianapolis, of chronic nephritis.

James Glenn Donald, Pine Apple, Ala.; University of Alabama School of Medicine, Tuscaloosa, 1901; member of the Medical Association of the State of Alabama; aged 46; died, April 21, of angina pectoris.

Edward Skillman Hawke ✠ Trenton, N. J.; University of Pennsylvania School of Medicine, Philadelphia, 1895; on the staff of the Mercer Hospital; aged 60; died, March 29, of acute dilatation of the heart.

Wilbur Fisk Shirkey ✠ Charleston, W. Va.; College of Physicians and Surgeons, Baltimore, 1894; past president of the Kanawha County Medical Society; aged 67; died, March 29, of heart disease.

Harry Gilmore Carter ✠ Burkeville, Va.; Medical College of Virginia, Richmond, 1914; superintendent of the Piedmont Sanatorium for eight years; aged 39; died, April 10, of pulmonary tuberculosis.

Harry S. Tuthill, Penn Yan, N. Y.; Jefferson Medical College of Philadelphia, 1881; aged 70; died, April 8, at the Soldiers' and Sailors' Memorial Hospital, following an operation for gastric ulcer.

George Henry Aiken, Fresno, Calif.; Medical Department of Columbia College, New York; 1869; Civil War veteran; for twelve years city health officer of Fresno; aged 81; died, April 12, of senility.

Israel Cleaver ✠ Reading, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1863; Civil War veteran; aged 83; died, April 10, at the Reading Hospital, of arteriosclerosis.

John Wallace Hazen ✠ Meadville, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1920; secretary, Crawford County Medical Society; aged 30; died, March 6, of pneumonia.

John A. Barnes, Tampa, Fla.; University of Georgia Medical Department, Augusta, 1891; member of the Florida Medical Association; for several years city physician; aged 58; died, March 1.

Early E. Scott, Fort Smith, Ark.; University of Louisville (Ky.) School of Medicine, 1908; member of the Arkansas Medical Society; served during the World War; aged 45; died, April 20.

William I. Sumner, Randleman, N. C.; University of Tennessee College of Medicine, Memphis, 1893; member of the Medical Society of the State of North Carolina; aged 56; died, May 6.

Robert Wilson Caldwell, Jackson, Ohio; Pulte Medical College, Cincinnati, 1895; member of the Ohio State Medical Association; aged 58; died suddenly, May 4, of cerebral hemorrhage.

Joseph W. Gregory, Cisco, Texas; Fort Worth School of Medicine, 1899; member of the State Medical Association of Texas; health officer; aged 57; died, April 12, of cerebral hemorrhage.

Albert Charles Zaiser, Santa Ana, Calif.; St. Louis College of Physicians and Surgeons, 1897; member of the California Medical Association; aged 52; died, April 11, of cerebral hemorrhage.

Joseph H. Delaney, Bozeman, Mont.; University of Virginia Department of Medicine, Charlottesville, 1897; aged 51; died, March 11, at San Antonio, Texas, of tuberculous meningitis.

Dargan Strother Pope, Columbia, S. C.; Jefferson Medical College of Philadelphia, 1875; member of the South Carolina Medical Association; formerly a druggist; aged 75; died, April 26.

Ralph Howard Pulsifer, Belgrade, Maine; Hahnemann Medical College and Hospital of Philadelphia, 1890; Boston University School of Medicine, 1890; aged 60; died, March 5.

Elizabeth Hinckley Delavan, Troy, N. Y.; Cleveland Medical College, 1897; Boston University School of Medicine, 1898; aged 80; died, March 4, at Round Lake, of heart disease.

William Lafayette Henderson, Woodstock, Tenn.; Memphis Hospital Medical College, 1894; aged 53; died, March 2, at the Baptist Memorial Hospital, Memphis, of uremia.

Ernest William Baum ⊕ Phoenix, Ariz.; Rush Medical College, Chicago, 1895; aged 53; died, April 20, at a hospital in Hollywood, Calif., of uremia and chronic nephritis.

George Henry Denike, Bristol, Ind.; Hahnemann Medical College and Hospital, Chicago, 1905; aged 62; died, April 8, at the Epworth Hospital, South Bend, of heart disease.

James H. Hall, Pittsburgh; Leonard Medical School, Raleigh, N. C., 1906; member of the Medical Society of the State of Pennsylvania; aged 45; died, January 11.

Lorenzo D. Allard ⊕ Portsmouth, Ohio; Medical College of Ohio, Cincinnati, 1879; on the staff of the Portsmouth General Hospital; aged 70; died, April 8, of myocarditis.

Albert Martin Card, Head Tide, Maine; Medical School of Maine, Portland, 1875; member of the Maine Medical Association; aged 75; died, March 9, of pneumonia.

Frank Pierce Lyons, Flora, Ind.; Medical College of Indiana, Indianapolis, 1881; formerly county coroner; aged 73; died, April 26, of pernicious anemia.

James T. Hoskins, Washington, D. C.; Washington Homeopathic Medical College, 1894; formerly a druggist; aged 72; died, March 15, following a long illness.

William Edward Anderson ⊕ Farmville, Va.; Medical College of Virginia, Richmond, 1888; aged 59; died, May 10, at the Stuart Circle Hospital, Richmond.

Abraham L. Holloway, Hutchinson, Kan.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1878; aged 68; died, April 9, of cerebral hemorrhage.

Frank David Paul, Rock Island, Ill.; State University of Iowa College of Homeopathic Medicine, Iowa City, 1886; aged 64; died, May 3, of pneumonia.

John William Craddock, Chicago; University of Illinois College of Medicine, Chicago, 1920; aged 31; died, March 9, following an operation for goiter.

Benjamin Thomas Fisher, Martinsville, Ind.; Medical College of Indiana, Indianapolis, 1879; aged 79; died, May 1, at Spencer, of arteriosclerosis.

Samuel Harper Smith, McKeesport, Pa.; College of Physicians and Surgeons, Baltimore, 1881; aged 70; died, March 6, of carcinoma of the bladder.

Lisle W. Neiswender ⊕ Columbus, Ohio; Ohio Medical University, Columbus, 1906; aged 46; died, April 12, of heart disease, following influenza.

Harry Williamson ⊕ Marion, Ind.; Medical College of Indiana, Indianapolis, 1892; aged 61; died, April 12, at Miami Beach, Fla., of myocarditis.

William Franklin Taylor, Laurel, Md.; University of Maryland School of Medicine, Baltimore, 1884; aged 71; died, April 26, of heart disease.

James P. Driscoll, Spokane, Wash.; Northwestern University Medical School, Chicago, 1906; aged 44; died, April 6, of cerebral hemorrhage.

Samuel S. Hall, Jackson, Calif.; California Eclectic Medical College, Los Angeles, 1891; aged 59; died, March 5, of cardiovascular disease.

Carl Strueh ⊕ Chicago; University of Zurich, Switzerland, 1886; aged 64; died, May 6, at his home in McHenry, of cerebral hemorrhage.

Charles L. Gangloff, Pittsburgh; Cleveland University of Medicine and Surgery, 1892; aged 57; died, April 12, of pneumonia.

Ashton T. Ford, Sylvester, Ga.; Atlanta Medical College, 1889; aged 60; was killed, May 2, by an assailant.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

CRESOG NOT ACCEPTABLE FOR N. N. R.

Report of the Council on Pharmacy and Chemistry

The Council has authorized publication of the following report.

W. A. PUCKNER, Secretary.

Cresog (Cresog Laboratories Co., Detroit) is stated to be "composed of a pure glycerine base with the addition of two per cent of 'Pomcresol' (manufactured by Searle and Co., Chicago), plus Bicarbonate of sodium, 2%." The label and advertising for Cresog contain such meaningless statements regarding the composition as: "Derivative of Cresol, also Glycerine and Others." No information is given in regard to the composition of "Pomcresol."

Though the Cresog label admits that the preparation has a phenol coefficient of but 0.1, the preparation is claimed to have "strong germicidal effect." It is recommended on the label for "cuts, wounds, infections, sprains, inflamed joints and chapped hands," and it is stated that Cresog, used in the absence of a physician, "eliminates the possibility of infection."

The Council finds Cresog unacceptable for New and Nonofficial Remedies because its composition is indefinite, its name nondescriptive of its composition, the claims unwarranted, and the recommendations for its use such as may lead the public to place false dependence on it in serious conditions.

ROBES' ANTI-RHEUMATIC INJECTIONS NOT ACCEPTABLE FOR N. N. R.

Report of the Council on Pharmacy and Chemistry

The Council has authorized publication of the following statement.

W. A. PUCKNER, Secretary.

Robes' Anti-Rheumatic Injections is marketed by Robes' Intravenous Products, Inc. In some of the advertising the synonym "Guaiamercol" is applied to the preparation. In Cuba this preparation is evidently called "Patogenol Gardier."

Robes' Anti-Rheumatic Injections is stated to contain mercuric chloride 0.9 mg., "guaiacum solids" 0.3 mg. and sodium chloride 0.0066 Gm. per cc. of 8 per cent alcohol.

The action of the "guaiacum solids" is not stated in the advertising or in the information submitted to the Council. The pharmacologic action is stated to be as follows:

"When this solution is introduced into the system of an individual suffering from rheumatism, there is produced immediately the coagulation of certain heterologic albuminae, determining the formation of an *antigen*. These coagulated albuminae, in the presence of the great mass in the blood stream, are dissolved and, at the same time, the injected solution continues to coagulate new groups of albuminae which, in turn, are dissolved in the blood stream. Thus, we have a real reversible reaction characteristic of the colloids, or a false catalysis, and this continues up to elimination through the natural emunctories. The organism responds to the attack by producing the corresponding antibodies, which possess specific action against the bacteria and its toxins."

"The affinity of the antibody for the causative organism is represented by reciprocal reactions, producing in that way the bacteriotropic and not the organotropic element. This reaction is influenced by opsonic elements of the lipoid group, which favor the chemotactic between the antibodies and these bacteria."

"In all cases where 'Robes' Anti-Rheumatic Injections' are administered to a patient really suffering with rheumatism, general and local phenomena appear due to physico-chemical reactions which determine the behavior of the heterogeneous albumins liberated."

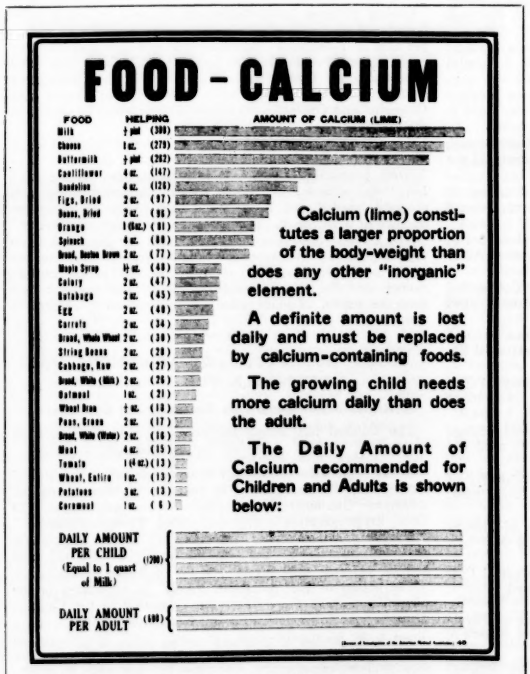
The therapeutic indications for Robes' Anti-Rheumatic Injections are stated to be:

"In cases of Rheumatism, in any of its manifold manifestations: Sciatica, Lumbago, torticollis, facial neuralgia and iritis of rheumatic origin; visceral rheumatism, acute, subacute or chronic muscular or articular rheumatism, arthritis deformans, gonorrheal arthritis; post-measles or post-scarlatinal arthritis. There are no counter-indications. Its use is always beneficial due to its bactericidal action."

The circular which accompanies the trade package contains the additional information:

"Sometimes in 15 to 20% of the cases, we notice that the patient does not respond to the medication; this is due to the fact that the 'chemical affinities' between the germs and the antibodies created by the introduction of our injections in the system, remain dormant. In such cases it is necessary to use the 'Lipoids' that we prepare from greasy vegetable acids, submitted to a special process that increases their vitality, and as we camphorate them, they act also as a tonic upon the heart, affected in most every rheumatic person."

The Council finds Robes' Anti-Rheumatic Injections unacceptable for New and Nonofficial Remedies because (1) its composition is indefinite in that no data are given as to the nature of "guaiacum solids"—which alone makes the preparation different from a simple solution of mercuric chloride in an alcoholic saline solution; (2) no tests are submitted whereby the "guaiacum solids" can be detected, or determined quantitatively; (3) the therapeutic claims are unwarranted, in that no evidence is submitted to show that "guaiacum solids" makes the preparation more effective than a simple solution of mercuric chloride or that the latter has any value in "rheumatism"; (4) the amount of the potent ingredient is not declared on the label; (5) the name is objectionable in that it does not indicate clearly the most potent ingredient and is therapeutically suggestive; (6) the trade package circular which accompanies the trade package advertises an unacceptable article and (7) because it is an unscientific preparation the use of which is detrimental to rational therapy.


FOOD - CALCIUM
FOOD
HELPING
AMOUNT OF CALCIUM (LIME)
Milk ½ pint (300)
Cheese 1 oz. (270)
Buttermilk ½ pint (252)
Cauliflower 4 oz. (147)
Dandelion 4 oz. (126)
Figs, Dried 2 oz. (97)
Beans, Dried 2 oz. (96)
Orange 1 (Med.) (81)
Spinach 4 oz. (80)
Bread, Boston Brown 2 oz. (77)
Maple Syrup ½ oz. (48)
Celery 2 oz. (47)
Rutabaga 2 oz. (45)
Egg 2 oz. (44)
Carrots 2 oz. (34)
Bread, Whole Wheat 2 oz. (30)
String Beans 2 oz. (29)
Cabbage, Raw 2 oz. (27)
Bread, White (Milk) 2 oz. (26)
Oatmeal 1 oz. (21)
Wheat Bran ½ oz. (18)
Peas, Green 2 oz. (17)
Bread, White (Water) 2 oz. (16)
Meat 4 oz. (15)
Tomato 1 (4 oz.) (13)
Wheat, Entire 1 oz. (13)
Potatoes 3 oz. (13)
Cornmeal 1 oz. (6)
Calcium (lime) constitutes a larger proportion of the body-weight than does any other "inorganic" element.
A definite amount is lost daily and must be replaced by calcium-containing foods.
The growing child needs more calcium daily than does the adult.
The Daily Amount of Calcium recommended for Children and Adults is shown below:
DAILY AMOUNT PER CHILD (Equal to 1 quart of Milk) (1200)
DAILY AMOUNT PER ADULT (680)

A miniature reproduction of a new poster just issued. This is one of forty educational posters prepared and issued by the Bureau of Investigation of the American Medical Association. The original posters are 22 inches by 28 inches, and sell for twenty cents each.

Correspondence

CARBON MONOXIDE FROM ILLUMINATING GAS

To the Editor:—The case of carbon monoxide poisoning reported by Dr. Stevens of New York in THE JOURNAL, April 17, impels me to call attention to my article published in THE JOURNAL in 1905 and entitled "The Dangers of the Domestic Use of Illuminating Gas and the Means of Avoiding Them." I served on the committee appointed by the College of Physicians, Philadelphia, to protest against large scale introduction of water-gas as an illuminant in Philadelphia. Newspapers and many citizens jeered at the protest, but the subsequent fatality record is evidence of the danger of gas highly charged with carbon monoxide. The "slot-meter" in which a coin automatically starts the flow of gas has added new danger. Frequently these meters are broken open by thieves and the gas is allowed to escape.

HENRY LEFFMANN, M.D., Philadelphia.

"WHO'S WHO IN AMERICAN MEDICINE"

To the Editor:—About a year ago I was circularized re "Who's Who in American Medicine." Without much thought I filled in the blank as one would the questionnaire of the A. M. A. Directory, and later canceled the order. I now realize the folly of such a publication coming from a commercial publishing company. The publishers insisted on mailing a copy, which I refused at the post-office. Since then I have had two bills and several letters insisting that I must take the book on "moral grounds."

There is no need of such a publication that cannot be better filled by our own directory. I ask, How is any one to judge who is who anyway? What special talent is to decide?

F. J. WALTER, M.D., La Mesa, Calif.

CUTIS VERTICIS GYRATA

To the Editor:—In THE JOURNAL, April 10, p. 1126, Dr. Raymond J. Sisson, in discussing cutis verticis gyrata, states that "only a few cases have been reported, and none were associated with acromegaly." In the article on acromegaly in "Endocrinology and Metabolism" (edited by Barker and Hoskins) **1**:831, two cases of cutis verticis gyrata in acromegaly are quoted, one reported by Sabat, the other by C. Adrian. I have seen one case in an acromegalic woman, but this case has not been reported.

PETER BASSOE, M.D., Chicago.

"CRYSTALLINE PROTEINS IN URINE"

To the Editor:—In THE JOURNAL, May 1, Welker, Thomas and Hektoen (p. 1333) state that "crystalline proteins have been isolated from the urine up to the present time in only eight cases." Dr. D. Wright Wilson (*J. Biol. Chem.* **56**:203 [May] 1923) described a spontaneously crystallizable protein of a Bence-Jones nature. Other references of interest in this connection are: *J. Biol. Chem.* **18**:277, 1914, and *J. Physiol.* **42**:199, 1911.

WITHROW MORSE, Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

RAT VIRUS

To the Editor:—There is being sold in considerable amounts a substance called Azoa, which is used for killing rats. It is said to be harmless except for killing rats. Can you give me any information about it? I am particularly interested because I know of instances in which it has been used around camps in the woods and on water courses which might drain down into a fairly thickly populated community which obtain their water from the river.

FRITZ B. TALBOT, M.D., Boston.

ANSWER.—Azoa, like other preparations of this type, contains a rat virus which is a bacterium belonging to the paratyphoid group of bacilli. Organisms of this group have been associated with outbreaks of gastro-enteritis or food poisoning. The group contains a number of species of bacteria which vary considerably in their pathogenicity toward man and animals. Manufacturers of rat viruses maintain that they are harmless for human beings. Epidemiologic evidence involving these viruses in outbreaks of paratyphoid infection has certainly not been frequent. Wade and McDaniel (THE JOURNAL, Nov. 1, 1924, p. 1416), in describing a milk borne outbreak with simultaneous but apparently unrelated increased incidence of the disease in Minneapolis, state that they found no evidence that would involve rat viruses. On the other hand, Spray (THE JOURNAL, Jan. 9, 1926, p. 109) has produced evidence to connect the use of a rat virus with a food poisoning outbreak. Contamination of a raw water supply or of food by organisms of the paratyphoid group, whatever their origin, would appear to involve some risk.

HAZARDS OF LAMP SHADE INDUSTRY — PREVENTION OF LEAD POISONING

To the Editor:—1. What special hazards are to be encountered in the manufacturing of lamp shades? The coloring of these shades is done by spraying various paints over prepared parchment. It appears that amyl alcohol is the usual solvent for the staining materials. The question has arisen as to the injurious effects of such volatile matter as might be contained in these preparations. 2. Are there any drugs or chemicals that might be added to drinking water to render it an efficient prophylactic against daily exposure to lead poisoning? In the literature, a mild acid drink, such as lemonade, seems to be generally favored. In the particular plant where this lead hazard is to be found, the men work only six hours a day. It is a question whether it would not be more advisable to favor the daily excretion of lead absorbed during that period rather than favor the storage of such in the bones, such as is usually done on a high calcium diet. Please omit name.

M.D., California.

ANSWER.—1. On all sides lamp shades may be seen, made of art glass, fabrics, pottery ware, reed and paper. Our correspondent refers only to the hazards incurred in the making of shades from paper. The processes involved are continually changing; no uniformity exists in this industry. The cheaper imitation parchment papers are given a coating of tinted shellac. The solvent is commonly denatured ethyl alcohol. At present there is a vogue for shades studded with glass particles or glass beads. In this process the fixative is made of resins and wax dissolved in denatured alcohol. The pigments are likewise dissolved or suspended in this mixture of resins and alcohol. In still other factories lacquers are employed in which benzene, benzine, amyl alcohol, amyl acetate or tetrachlormethane may be used. It is from this group that intoxications may be expected. Benzene in particular should not be employed in such spray methods without adequate means for eliminating fumes; i. e., through the use of booths with suction.

If the workers are affected by amyl alcohol (fusel oil), some or all of the following manifestations may arise: vomiting, dizziness, great weakness, slowing of heart rate, shortness of breath, severe headache or low blood pressure. If benzene is responsible for the intoxications, some or all of these manifestations may arise: slight inflammation of the conjunctiva and respiratory tract, pain in the abdomen, frequent urination, headache or muscle tremors; occasionally a very susceptible person will quickly become unconscious and die without any preliminary symptoms or signs; in chronic cases, hemorrhage into the skin and from the gums, lungs, stomach or genitalia is characteristic, together with anemia, leukopenia and loss of blood platelets. A more complete description of the toxicity of benzene, with references, was given in THE JOURNAL, Oct. 3, 1925, p. 1081. Most of the solvents now in common use as thinners and in lacquers and varnishes will produce severe dermatitis, usually on the hands and forearms.

2. The addition of any substance to the drinking water supply of workers exposed to lead is not at this time regarded as a practical step in the prevention of lead poisoning. Previously, weak sulphuric acid lemonade or lemonade containing magnesium sulphate was recommended in the belief that lead sulphate would be formed and that this salt would be insoluble in the gastro-intestinal fluids. While lead sulphate is less soluble, it is to some extent taken up by the intestinal tract. Much lead poisoning is produced by lead entering the body by way of the respiratory tract. Obviously, any treatment of the water supply would not protect against this mode of entry.

High calcium or other alkali intake favors the fixation of lead in the body tissues, with a resulting freedom from clinical lead poisoning. It is not known, however, whether or not this is merely putting off the eventuality of lead poisoning when later the hydrogen ion concentration is altered through the omission of alkalis. It is regarded as a safe procedure to encourage lead workers to utilize a high calcium diet, to take alkalis at frequent intervals, and then about once a year to eliminate the stored lead through the administration of such chemicals as ammonium sodium chloride, iodide or ammonium acetate. Best of all is the elimination of the hazard itself through the control of lead dusts and fumes, and the education of workers to avoid the entry of lead into the mouth from the hands, cigarets or food.

IODINE FOR GOITER — FELLOWSHIP AND MEMBERSHIP

To the Editor:—1. Please set me right on when and when not to give iodine in goiter. Recently a friend had iodine administered, and there was considerable argument pro and contra. In hypothyroidism, thyroid extract is administered; yet I see that Crile and others give thyroid extract or iodine preparatory to removal of the gland. It is the iodine in the thyroid extract that produces the results, if I understand it right. Then why give thyroid extract or iodine in both conditions? What is the consensus regarding the roentgen ray in goiter? One man says yes, another says no, so it puts one where he does not know how to advise his goiter patients. From the journals and in conversation with different men, it is just as perplexing. I have given iodine in hyperthyroidism and got fairly good results. The foregoing may sound more or less puerile, but I just cannot see where the thyroid extract comes in in hyperthyroidism. 2. What is the difference between a member of and a Fellow of the American Medical Association?

HERMAN CASTILE, M.D., Foreman, Ark.

ANSWER.—1. Many of the rest of us are at times as puzzled as is our correspondent concerning the proper procedure in certain cases of hyperthyroidism, but not all of us are as frank in admitting our difficulties. The reasonable inference to be drawn from the conflicting evidence is that there is still much to be learned about the thyroid and its functions, and that the question of treatment is not nearly so simple as some would have us think. We are advised to give iodine in exophthalmic goiter and warned against giving it in toxic goiter. While there is no great difficulty in placing some cases in one and some cases in the other of these two groups, there are many cases in which this classification is difficult, and for many of us impossible on clinical grounds. Whether iodine should be used in these doubtful cases may in some instances be determined only by cautious trial. In recent years, attention has been repeatedly called to the appearance of symptoms of hyperthyroidism in persons who have been given even small doses of iodine. In hyperthyroidism the signs and symptoms, such as tachycardia, nervousness, tremor, loss of weight or increased metabolic rate, appear in widely differing degrees in different cases, and the question may well be raised as to the possible multiplicity of thyroid hormones, overfunction of one or more of which may account for the variability of the clinical picture. There is no consensus as to the value of the roentgen ray in hyperthyroidism. Some patients improve remarkably following a series of roentgen-ray treatments. In others, the results are disappointing. Ligation and roentgen ray together are sometimes effective. Partial and subtotal thyroidectomy are required in others. In estimating the value of any one of these procedures, we are often inclined to forget that overacting thyroids pass through cycles of overaction and relative quiescence, independently of treatment.

2. All members, in good standing, of state medical associations whose names are reported to the American Medical Association for enrolment are members of the American Medical Association. All members of the American Medical

Association in good standing are eligible for Fellowship. To qualify as a Fellow, a member is required to make formal application and to subscribe to THE JOURNAL. Fellowship dues and subscription to THE JOURNAL are included in the one annual payment of $5. None but Fellows can serve as officers or delegates, and none but Fellows and invited guests can participate in the work of the sections of the Scientific Assembly.

TREATMENT OF INFECTION OF THE ANTRUM

To the Editor:—Will you please outline for me the recognized modern treatment of an infection of the antrum of Highmore, whether or not to be irrigated through a tooth socket opening; if so, how often and what solution used? Whether or not a window operation through the nose is the thing? Whether vaccines would be of value, whether physiotherapy (quartz) is curative, or, if of value, how much can be depended on it alone? Any further suggestions as to treatment will be appreciated.

ROLAND R. CROSS, M.D., Dahlgren, Ill.

ANSWER.—Infections of the antrum of Highmore, or maxillary sinus, are usually treated by irrigation or, if necessary, by direct drainage. There are three routes by which the antrum may ordinarily be irrigated. First, by way of the natural opening in the middle meatus. This merely requires cocainization of the middle meatus and then the passing of a cannula into the natural opening or into one of the accessory openings. Second, there is the route most often used by way of the inferior meatus. After thorough cocainization, a trocar is pushed through the inner wall of the antrum, which is the outer wall of the nose, and the sinus thus entered. The third route is by way of the alveolar process, usually through a socket of the upper second bicuspid or first or second molar. No good tooth should be sacrificed in order to enter the antrum this way. In the second place, if a tooth has for some reason or other been removed, it is possible by means of a hand or electrically driven drill to open into the antrum. However, we believe the last route the least desirable, as it is almost impossible to prevent reinfection of the antrum from the entrance of saliva or food particles through this opening into the cavity.

In acute cases, a warm physiologic sodium chloride or mildly alkaline solution, such as 2 or 3 per cent sodium bicarbonate, is usually best. For the subacute or more chronic cases, solutions such as 1: 2,000 or 1: 3,000 copper sulphate may be employed. If the irrigations do not suffice in the acute or in the chronic cases, operative procedures are sometimes necessary and the various routes previously mentioned may be used. We may enlarge the natural opening in the middle meatus or, preferably in order to get better drainage, do a window resection in the inferior meatus, making as large an opening as possible. In some cases a more radical operation, such as the Luc-Caldwell or Denker, is required in very chronic or obstinate instances. Vaccines are as a rule of value only when thorough drainage has first been established. Physiotherapeutic measures, such as the quartz lamp treatment or diathermy, have not given very definite curative results, so far as we know. An important measure for prophylaxis or cure is the removal of any upper teeth, especially the second bicuspid or first or second molars, which show infection of the apexes. If not removed, these teeth very easily produce infection of the maxillary sinus. In any case, we believe that conservative measures, such as irrigation or minor operations, should be employed before any radical procedure is instituted.

TREATMENT OF WOUNDS

To the Editor:—In minor industrial accidents, is it now considered good practice to wash blood off injured surface with an antiseptic solution, or to dress the injury without doing this? Please use initials.

R. W. C., M.D., New Jersey.

ANSWER.—If there is any considerable amount of blood, it should be washed off. If the blood has dried and is crusted, a liquid composed of solution of hydrogen dioxide and water, equal parts, quickly removes this. The small wound should then be painted with tincture of iodine or a 2 per cent solution of mercurochrome-220 soluble, and a dry dressing applied.

TREATMENT OF PINWORMS

To the Editor:—I was interested to see Dr. Hollingsworth's inquiry regarding the treatment of pinworms (THE JOURNAL, April 24, p. 1309). Long residence in the tropics, where all varieties of intestinal parasites are encountered, has led me to rely on massive doses of bismuth carbonate. For an adult, we give from 1 to 2 drachms (4 to 8 Gm.) night and morning for three days.

H. P. NOTTAGE, M.D., Albany, Ore.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALABAMA: Montgomery, July 13-16. Sec., Dr. S. W. Welch, Montgomery.
AMERICAN BOARD OF OTOLARYNGOLOGY, CANADA: Montreal, June 1. Sec., Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Mo.
ARIZONA: Phoenix, July 6. Sec., Dr. W. O. Sweek, 404 Heard Bldg., Phoenix.
CALIFORNIA: San Francisco, July 12-15. Sec., Dr. Charles B. Pinkham, 906 Forum Bldg., Sacramento.
COLORADO: Denver, July 6. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.
CONNECTICUT: Hartford, Reg. Bd., July 13-14. Sec., Dr. Robert L. Rowley, 79 Elm St., Hartford. Homeo. Bd., New Haven, July 13. Sec., Dr. Edwin C. M. Hsll, 82 Grand Ave., New Haven.
DELAWARE: Wilmington, Regular Board and Homeo. Board, June 15-17. Pres., Dr. H. W. Briggs, Wilmington.
FLORIDA: St. Petersburg, June 14-15. Sec., Dr. H. M. Rowlett, Box 603, Tampa.
GEORGIA: Atlanta, June 9-11; Augusta, June 1-3. Sec., Dr. C. T. Nolan, Marietta, Ga.
INDIANA: Indianapolis, July 13-15. Sec., Dr. Wm. T. Gott, 421 State House, Indianapolis.
IOWA: Iowa City, June 8-10. Commissioner of Health, Dr. Don M. Griswold, State Capitol, Des Moines.
KANSAS: Kansas City, June 15. Sec., Dr. Albert S. Ross, Sabetha.
KENTUCKY: Louisville, June 24-26. Sec., Dr. A. T. McCormack, 532 West Main Street, Louisville.
MAINE: Augusta, July 6-7. Sec., Dr. Adam P. Leighton, 192 State St., Portland.
MARYLAND: Baltimore, Reg. Bd., June 15-18. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Baltimore. Homeo. Bd., June 15-16. Sec., Dr. Joseph S. Garrison, Old Orchard Rd., Ten Hills, Baltimore.
MASSACHUSETTS: Boston, July 13-15. Sec., Dr. Frank M. Vaughan, Room 144, State House, Boston.
MICHIGAN: Ann Arbor, June 8-10. Detroit, June 14-16. Sec., Dr. Guy L. Connor, 707 Stroh Bldg., Detroit.
MINNESOTA: Minneapolis, June 15. Sec., Dr. A. E. Comstock, 734 Lowry Bldg., St. Paul.
MISSISSIPPI: Jackson, June 24-25. Sec., Dr. F. J. Underwood, Jackson.
MISSOURI: St. Louis, June 28-July 1. Chief, Licensure, Dr. Ross Hopkins, Jefferson City.
NATIONAL BOARD OF MEDICAL EXAMINERS: Part I, June 21-23; Part II, June 22-23. All applications should be made on or before May 15. Sec., Dr. J. S. Rodman, 1600 Walnut Street, Philadelphia.
NEBRASKA: Omaha, June 8-10. Director, Bur. of Exam. Bds., Mrs. Clark Perkins, Lincoln.
NEW JERSEY: Trenton, June 15-16. Sec., Dr. Alexander MacAlister, Room 1101, Trenton Trust Bldg., Trenton.
NEW YORK: Albany, Buffalo, New York and Syracuse, June 28-July 1. Chief, Mr. Herbert J. Hamilton, Education Bldg., Albany.
NORTH CAROLINA: Raleigh, June 21-25. Sec., Dr. K. P. B. Bonner, Morehead City.
NORTH DAKOTA: Grand Forks, July 6. Sec., Dr. G. M. Williamson, Grand Forks.
OHIO: Columbus, June 8-11. Sec., Dr. H. M. Platter, Columbus.
OKLAHOMA: Oklahoma City, June 15-16. Sec., Dr. J. M. Byrum, Shawnee.
OREGON: Portland, July 6-8. Sec., Dr. U. C. Coe, 1208 Stevens Bldg., Portland.
PENNSYLVANIA: Philadelphia and Pittsburg, July 13-17. Director Prof. Education, C. D. Koch, Harrisburg.
RHODE ISLAND: Providence, July 1-2. Sec., Dr. B. U. Richards, 315 State House, Providence.
SOUTH CAROLINA: Columbia, June 22. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia.
SOUTH DAKOTA: Custer, July 20. Director, Med. Lic., Dr. H. R. Kenaston, Bonesteel.
TENNESSEE: Memphis, Nashville and Knoxville, June 11-12. Sec., Dr. Alfred B. De Loach, 434 Madison Ave., Memphis.
TEXAS: Austin, June 15-17. Sec., Dr. T. J. Crowe, 918 Mercantile Bank Bldg., Dallas.
UTAH: Salt Lake City, July 6. Dir., Mr. J. T. Hammond, 412 State Capitol Bldg., Salt Lake City.
VERMONT: Burlington, June 23. Sec., Dr. W. Scott Nay, Underhill.
VIRGINIA: Richmond, June 16-19. Sec., Dr. J. M. Preston, 720 Shenandoah Life Bldg., Roanoke.
WEST VIRGINIA: Martinsburg, July 6. Sec., Dr. W. T. Henshaw, Charleston.
WISCONSIN: Milwaukee, Basic Science Board, June 12-13. Sec., Dr. M. F. Boardman, Madison. Regular Board, June 29-July 1. Sec., Dr. Robert E. Flynn, State Bank Bldg., La Crosse.
WYOMING: Cheyenne, June 7-9. Sec., Dr. G. M. Anderson, Cheyenne.

Michigan Reciprocity Report

Dr. Guy L. Connor, secretary of the Michigan Board of Registration in Medicine, reports that 20 candidates were licensed by reciprocity from January to April, 1926. The following colleges were represented:

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Atlanta School of Medicine		(1910)	Georgia, (1911) Montana
Northwestern University Medical School		(1924)	Illinois
Indiana University School of Medicine		(1924)	Indiana
University of Kansas School of Medicine		(1920)	Kansas
Johns Hopkins University Medical Dept.		(1916), (1922)	Maryland
Harvard University		(1916)	Mass.
Detroit College of Medicine and Surgery		(1924)	California
St. Joseph Hospital Medical College		(1882)	Missouri
St. Louis University School of Medicine		(1924)	Illinois
Cincinnati College of Medicine and Surgery		(1900)	Kentucky

Cleveland Homeopathic Medical College	(1898)	Ohio
Hahnemann Med. College and Hosp. of Philadelphia	(1899)	Penna.
University of Tennessee College of Medicine	(1912)	Tennessee
University College of Medicine, Richmond	(1898)	W. Virginia
Dalhousie University Faculty of Medicine	(1924)	Ohio
McGill Univeristy Faculty of Medicine	(1922)	Ohio
University of Toronto Faculty of Medicine	(1924)	Ohio
National University of Ireland, Dublin	(1916)*	Montana

* Verification of graduation in process.

Book Notices

THE SURGERY OF PULMONARY TUBERCULOSIS. By John Alexander, B.S., M.A., M.D., Assistant Professor of Surgery in the Medical School, University of Michigan. With introductions by Hugh Cabot, M.D., C.M.G., LL.D., Professor of Surgery, University of Michigan, and Edward R. Baldwin, M.A., M.D., Director of the Trudeau Foundation and Trudeau School of Tuberculosis. Cloth. Price, $4.50. Pp. 356, with 65 illustrations. Philadelphia: Lea & Febiger, 1925.

This is the most complete monograph that has yet appeared in the English language on the subject. It is an ideal contribution to the literature, as it is scholarly, orderly and complete, and condenses into a small volume the present knowledge of the subject. The author points out that few physicians and surgeons are yet aware that surgery is now curing or improving approximately two thirds of those selected cases of far advanced pulmonary tuberculosis that other methods of treatment have failed to benefit. The material covered includes a perspective of the surgery of pulmonary tuberculosis; evolution of surgical therapy, pathologic anatomy and physiology of pulmonary compression; indications and contraindications for surgical intervention; artificial pneumothorax compared with thoracoplasty; choice of operation; partial operations; preoperative management; choice and technic of anesthesia; the Wilms-Sauerbruch extrapleural paravertebral thoracoplasty; the Bauer subscapular extrapleural paravertebral thoracoplasty; paravertebral thoracoplasty of the upper seven ribs compared with radical phrenicotomy; extrapleural parasternal thoracoplasty; partial artificial pneumothorax combined with partial paravertebral thoracoplasty; phrenicotomy; extrapleural pneumolysis; Jacobæus' closed intrapleural pneumolysis; open intrapleural pneumolysis; drainage of the tuberculous lung cavity; spontaneous pneumothorax; tuberculous effusion and empyema; postoperative course and management, including complications; changes in configuration of the chest following thoracoplasty, and the results of paravertebral thoracoplasty. There is a bibliography which is practically complete for the years 1918-1924, inclusive, with the titles of a number of articles appearing early in 1925 and several references of historical importance dated prior to 1918.

Alexander prefers thoracoplasty to artificial pneumothorax. In discussing preoperative preparation, he approves the use of digitalis to strengthen the heart. In general, he prefers the Wilms-Sauerbruch extrapleural paravertebral thoracoplasty to the other methods of thoracoplasty, although in certain cases other methods of thoracoplasty may be employed, or extrapleural pneumolysis, or, in rare cases, the drainage of cavities. In considering Jacobæus' closed intrapleural pneumolysis Alexander concludes, as in the chapter dealing with artificial pneumothorax compared with thoracoplasty, that unless artificial pneumothorax can be undertaken and completed under favorable conditions, thoracoplasty offers the patient a better prognosis. If a satisfactory pneumothorax cannot be obtained by a relatively simple operation of short duration, both cauterization and pneumothorax should be abandoned and thoracoplasty performed. Sauerbruch considers ether the anesthetic of choice, and his experience on many hundreds of patients with active pulmonary tuberculosis has convinced him that it has no unfavorable action on the lungs, unless by abolishing the cough reflex it allows aspiration of secretions. This opinion as to the relative harmlessness of ether in the presence of pulmonary tuberculosis is not in accord, however, with the general belief and practice. Many thoracic surgeons in this country prefer to combine procaine-epinephrine local anesthesia with nitrous oxide-oxygen anesthesia. Alexander believes that local anesthesia in conjunction with ethylene gas anesthesia is probably the best anesthetic available for the surgery of pulmonary tuberculosis, except in patients with more than 30 cc. of sputum a day and those to whom a general anesthetic per se would be dangerous. In the latter cases, local anesthesia alone should be used.

In considering the Wilms-Sauerbruch operation, as in the various chapters dealing with other operative procedures, the author begins with a definition, and then discusses the operation in the minutest detail, including the position of the patient on the table, the position of the surgeons, the incision, the use of wound protectors, and the order of rib resections. In explaining the technic for subperiosteal rib resection, he describes and illustrates his ingenious rib-edge periosteum stripper, which will strip the rib edges rapidly, cleanly and without danger of wounding the pleura. Other surgeons have spoken highly of this instrument and agree with the author that it renders easy the separation of the periosteum from the edges of the ribs beneath the tenacious attachment of the intercostal muscles, a step that is often tedious and must be done slowly in order not to injure the pleura. Alexander regularly resects the most prominent rib first. This is usually the ninth; then follow the eighth, seventh, sixth, fifth, tenth and eleventh. This concludes the first stage if a two-stage operation is performed, which is the rule. The second stage should be done within six weeks of the first as a rule, because in from six to eight weeks after the first stage there is regeneration of rib from the remaining periosteum, often with bony bridging between the ribs, and with more or less rigid fixation of the chest wall. At the second stage, the upper four ribs are resected in this order: fourth, third, second, first. Most surgeons prefer an interval of from two to three weeks. The length of the various ribs to be resected is discussed in detail. Supplementary operations, which at times are necessary, are briefly summarized. The important points of the Wilms-Sauerbruch operation include the subperiosteal resection of sufficient lengths of the eleventh to the first rib, inclusive, from below upward, in two stages; removal of ribs beginning from the tips of the transverse processes of the vertebrae; careful avoidance of wounding the pleura; speed in operating; an interval of from two to three, but not more than six, weeks between stages. If the tuberculous lesions, especially cavities, are insufficiently compressed and rested six months after the operation, one or more of the following supplementary operations may be indicated: phrenicotomy, secondary paravertebral resections, extrapleural parasternal thoracoplasty, extrapleural pneumolysis with "filling," or cavity drainage. Alexander believes that doubt may justly be expressed as to the wisdom of resecting the lower ribs at the first stage of the operation because of the danger consequent on the impairment of expectoration, and that phrenicotomy as a substitute for primary resection of the lower ribs will probably reduce the operative mortality and postoperative lung complications.

The author states that surgery has favorably influenced 61.2 per cent of the patients reported as operated on during the past seven years and has actually cured 36.8 per cent of them. All were in far advanced stages of the disease, most had cavity formation, and many had bilateral active lesions. They were referred for operation because the prognosis was considered hopeless without surgical intervention. The extent to which these results can be bettered depends on the widespread use of the improvements that are being made in operative technic and in preoperative and postoperative management, and particularly in the proper selection of patients for surgery. The author has contributed this volume in the hope that in the future operation frequently will be performed while the patients are in good general condition and while the lesions are almost entirely limited to one lung.

HANDBUCH DER HALS-NASEN-OHREN-HEILKUNDE. Mit Einschluss der Grenzgebiete. Herausgegeben von A. Denker und O. Kahler. Zweiter Band. Zweiter Teil. Die Krankheiten der Luftwege und der Mundhöhle. Paper. Price, 84 marks. Pp. 1068, with 394 illustrations. Berlin: Julius Springer, 1926.

This is the second volume of this encyclopedic work on the ear, nose and throat, and covers the subject of the respiratory tract and the oral cavity. The volume opens with a continuation of the pathology and therapy of the nose from the previous volume. Under the heading of therapy, many general

measures of prophylactic and active nature are given. Many details are presented under the heading of anesthesia, both general and local. A number of the new preparations for local anesthesia are mentioned. The chapters on operative technic include tracheotomy. Under the next heading there is a complete discussion of malformations of the nose, mouth, pharynx and larynx. The chapter on diseases of the nasal septum is well illustrated, and tells about the various methods that have been used in operations for the correction of deflections. Under the next heading there is a discussion of acute and inflammatory conditions involving the nose and nasal accessory sinuses, with the various cranial complications that arise from these conditions. This volume is a good companion to the preceding one; it is complete, has a detailed bibliography, presents numerous illustrations, and contains a world of facts.

PUBLIC HEALTH LAW. A Manual of Law for Sanitarians. By James A. Tobey, M.S., LL.B., Lecturer on Public Health Law at the Massachusetts Institute of Technology, Yale School of Medicine, and Columbia University. Cloth. Price, $4.50. Pp. 304. Baltimore: The Williams & Wilkins Company, 1926.

Within the compass of 239 pages, exclusive of four appendixes and a table of cases, the author outlines the organization and powers of health departments, state and local, and devotes one chapter each to the control of communicable diseases, to the abatement of nuisances, to venereal diseases, to the legal aspects of mental hygiene, to the legal liability for damages arising out of public health activities, and to the drafting of health legislation. In early chapters the author discusses the basis and importance of public health law. The value of the book is chiefly in its general information and in its references to sources from which further information can be obtained. In compiling and arranging the references, the author has rendered a pioneer service. In addition to the numerous citations to adjudicated cases, a selected bibliography is included as one of four appendixes, the references being divided into three groups: (1) those pertaining to public health in general; (2) those relating to law without particular reference to public health, and (3) those referring to public health law. The book, according to the preface, while designed especially for health workers, "may likewise prove of value to jurists, lawyers, government officials, physicians, sociologists, students, and others who may be called on to delve into the administration of sanitary science." It has in it little of peculiar value to the physician.

DIE INNERVATION DER HARNBLASE. Physiologie und Klinik. Von Dr. Med. Helmut Dennig, Assistent der medizinischen Klinik Heidelberg Privatdozent für innere Medizin. Paper. Pp. 98, with 13 illustrations. Berlin: Julius Springer, 1926.

This is a welcome addition to the subject of the normal and pathologic physiology of the bladder. Assembled here is a critical survey of all the literature on the function and innervation of the vesical musculature, sensibility of the bladder, and the relations of the normal act of micturition to higher centers in the spinal cord and brain. A number of instructive experiments made by the author are reported. The chapters on disturbances (both organic and functional) in the act of urination will be of especial value to the internist, neurologist and urologist. The book can be warmly recommended as the best monograph so far published on the subject.

BACTERIOLOGY AND APPLIED IMMUNOLOGY FOR NURSES. By Robert A. Kilduffe, A.B., A.M., M.D., Director, Laboratories, Atlantic City Hospital. Leather. Price, $2. Pp. 252, with 79 illustrations. Milwaukee: Bruce Publishing Company, 1926.

Those who have attempted to teach a course in bacteriology to nurses will appreciate the difficulties involved, particularly that of the very brief time allowed for laboratory work. A specially prepared textbook should be of service for such instruction, and Dr. Kilduffe's little volume is the latest to be made available. The book is attractively printed and fully illustrated, is written in simple language, and will undoubtedly be used. It is not evident why the discussion of practical applications of immunity belongs in the general section of "Bacteriology," while water and milk examination are found under "Applied Immunology."

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits.

CORRECTING SPEECH DEFECTS AND FOREIGN ACCENT. By Grace A. McCullough, Supervisor of Speech Improvement in the New York City Schools, and Agnes V. Birmingham, in charge of Speech Improvement in the New York City Schools. Cloth. Price, 88 cents. Pp. 232, with illustrations. New York: Charles Scribner's Sons, 1925.

Practical and suggestive textbook of great interest to physicians who may be asked to advise in cases of speech defect.

A CLASSIFICATION OF THE TUMORS OF THE GLIOMA GROUP ON A HISTOGENETIC BASIS WITH A CORRELATED STUDY OF PROGNOSIS. By Percival Bailey and Harvey Cushing. From the Surgical Clinic and Laboratory of the Peter Bent Brigham Hospital and the Laboratory of Surgical Research of the Harvard Medical School. Cloth. Price, $5. Pp. 175, with 108 illustrations. Philadelphia: J. B. Lippincott Company, 1926.

A monographic record of technical research under good auspices.

PHYSICS AND CHEMISTRY FOR NURSES. By A. R. Bliss, Jr., A.M., Phm.D., M.D., and A. H. Olive, A.M., Ph.C.H., Phm.D. Fourth edition. Cloth. Price, $2.50. Pp. 190, with 20 illustrations. Philadelphia: J. B. Lippincott Company, 1926.

Much more information than a nurse can learn or use, but conforms to the standard curriculum of the National League of Nursing Education.

SIMPLIFIED INFANT FEEDING: With Eighty Illustrative Cases. By Roger H. Dennett, B.S., M.D., Professor of Diseases of Children and Director of the Department in the New York Post-Graduate Medical School. Third edition. Cloth. Price, $5. Pp. 415, with 14 illustrations. Philadelphia: J. B. Lippincott Company, 1926.

New edition with additional material on acidified milk, calcium caseinate, vitamins, gelatin, and similar new subjects.

THE ASPERGILLI. By Charles Thom and Margaret B. Church of the Microbiological Laboratory, Bureau of Chemistry, United States Department of Agriculture. By G. L. Keenan. Cloth. Price, $5. Pp. 272, with illustrations. Baltimore: Williams & Wilkins Company, 1926.

Complete information concerning molds, with a key to their identification.

OUR MINDS AND THEIR BODIES. By John Laird Regius Professor of Moral Philosophy in the University of Aberdeen. Cloth. Price, $1. Pp. 122. New York: Oxford University Press, 1925.

Well written lecture giving modern philosophic conceptions of relations of mind to body.

YOUR HAIR AND YOUR HEALTH. By Oscar L. Levin, M.D., Chief of Clinic, Cornell University Medical College and Clinic. Cloth. Price, $1.50. Pp. 163, with 10 illustrations. New York: Greenberg, 1926.

Guidebook written in popular tone but with some popular fallacies.

THE PROCEEDINGS OF THE CHARAKA CLUB. Volume VI. Boards. Price, $4. Pp. 145, with Illustrations. New York: Paul B. Hoeber, Inc., 1925.

Medical belles-lettres of a charming type, reflecting the esthetic aspects of the art and practice.

DISEASES OF THE NEW-BORN: A Monographic Handbook. By John A. Foote, M.D., Professor of Diseases of Children, Georgetown University Medical School. Cloth. Price, $5. Pp. 231, with 85 illustrations. Philadelphia: J. B. Lippincott Company, 1926.

Brief practical essays, well illustrated.

THE FURTHER STUDIES ON DECREMENTLESS CONDUCTION. By Genichi Kato, Professor of Physiology, Medical College, Keio University, Tokyo. Cloth. Pp. 163, with 88 illustrations. Tokyo, 1926.

Technical research on energy of nerve impulse.

MORTALITY STATISTICS, 1923. Twenty-Fourth Annual Report. Department of Commerce. Herbert Hoover, Secretary. Bureau of the Census, W. M. Steuart, Director. Cloth. Price, $1.50. Pp. 485. Washington: Government Printing Office, 1926.

COLLECTED PAPERS. By the Staff of the Henry Ford Hospital. First Series, 1915-1925. Cloth. Price, $8. Pp. 634, with 193 illustrations. New York: Paul B. Hoeber, Inc., 1926.

Medicolegal

Liability of Private Hospital—Regarding Physicians

(Vaughan v. Memorial Hospital (W. Va.), 130 S. E. R. 481)

The Supreme Court of Appeals of West Virginia, in affirming an order setting aside a verdict rendered for the plaintiff and awarding the defendant a new trial, says that the plaintiff sustained an injury to his right foot, two bones near the first and second joint of the second and third toes being broken. Two days later he was taken to the defendant hospital for treatment. After his discharge the foot became swollen and painful. A roentgenogram disclosed that the bones were not knitted, and they were subsequently removed. The defendant contended that it was not responsible for any default on the part of the physicians, they being independent agents. But a hospital incorporated and conducted for private gain, for the benefit of its stockholders, is liable in damages to its patients for negligence or misconduct of its officers and employees. The purely private character of the defendant was practically admitted. The capital invested is like capital invested in any other corporation conducted for profit. In its contracts it stands on the same basis as any other contractor, and as to employees and third persons, it is subject to the same general rule, respondeat superior (let the master answer). The plaintiff and the defendant were brought into relation with each other through the agency of the employer of the former, and he received the surgical and medical care to which he was entitled under the rules and regulations of the state compensation commissioner, the expense thereof to be paid out of the workmen's compensation fund. The application to the commissioner for payment of the medical, surgical and hospital treatment was rendered in the name of the defendant, and included the item for the operation on the plaintiff's foot by the two physicians before referred to. Moreover, it appeared in evidence that those physicians were the managers of the hospital, and that the roentgen-ray machine used in the hospital for the examination of the plaintiff's injury was the property of the institution. Under these conditions, authorities cited hold that the defendant could not absolve itself from the obligation it owed to the plaintiff patient to furnish him proper treatment, on the claim that the physicians who treated him, at its instance, were independent contractors. In view of this, the trial court erred in submitting the question of whether the medical and surgical treatment was rendered the plaintiff by the physicians on their own account, in an instruction given to the jury at the instance of the defendant.

This court thinks that it may be said to be the generally accepted doctrine that a physician is not required to exercise the highest degree of care or skill and diligence possible, in the treatment of an injury, or disease, unless he has by special contract agreed to do so. In the absence of such special contract, he is only required to exercise such reasonable and ordinary skill and diligence as are ordinarily possessed and exercised by the average of the members of the profession in good standing, in similar localities and in the same general line of practice, regard being had to the state of medical science at the time. The general rule just stated does not make the physician in any sense a warrantor or insurer of the success of his treatment, in the absence of a special contract to that effect. And where a physician exercises ordinary skill and diligence, keeping within recognized and approved methods, he is not liable for a mere mistake of judgment. However, he is liable for the result of an error of judgment, when such error is so gross as to be inconsistent with that degree of skill which it is the duty of a physician to possess.

The bones taken from the plaintiff's foot were introduced, but the trial court refused to permit them to go in evidence to the jury for lack of being properly identified. The physician who took them from the foot was not introduced as a witness, nor was his deposition taken. His absence was not accounted for. He unquestionably possessed peculiar knowledge concerning facts vitally essential to the plaintiff's case —the condition of the bones when removed, what caused the condition, and whether there was pus present. The circuit judge doubtless thought this testimony should have been offered. He has a discretion to exercise when a case has not been fully developed. He may set aside the verdict to do justice to all parties. This court cannot say he abused that discretion in this case. If the testimony of the physician who removed the diseased bones was material to the plaintiff's case, and he wished to avoid the effect of the legal presumption that, if the physician had testified, his testimony would have been adverse to him, he should have shown proper diligence to have the physician present as a witness, or have taken his deposition.

Good Indictment of Chiropractor

(Robinson v. State (Ala.), 106 So. R. 53)

The Court of Appeals of Alabama, in affirming a judgment of conviction of defendant Robinson, says that the case was tried on the first two counts of the indictment, to which demurrer was interposed. Those counts charged that the defendant did treat or offer to treat diseases of human beings by a system known as chiropractic for a reward, without first having obtained a certificate of qualification from the state board of medical examiners of the state of Alabama and contrary to law; and further charged that he did treat or offer to treat diseases of human beings by a system known as chiropractic for a reward, such a system being practiced by men known as chiropractors, without first having obtained a certificate of qualification from the state board of medical examiners of the state of Alabama, contrary to law. These counts were demurred to on the ground that they did not sufficiently describe the system by which the defendant was averred to have treated or offered to treat disease; that they failed sufficiently to describe the alleged system known as chiropractic or what was done by chiropractors, or to aver that it was unknown. But the two counts sufficiently charged the offense and were not subject to the demurrers interposed. The Alabama statute is designed to prevent the treatment of diseases of human beings by any system whatever, without the party so engaged having first obtained a certificate of qualification from the state board of medical examiners of Alabama.

"Shell Shock"—Doubt as to Sanity of Defendant

(People v. Gilberg (Calif.), 240 Pac. R. 1000)

The Supreme Court of California, in holding that the trial court had not abused its discretion by omitting to suspend the trial of the defendant for a lewd act, to submit the question whether or not he was then insane, says that he had served in the World War. He received no battlefield wounds, but insisted that he had suffered an injury by falling into a "funk-hole." It appeared that he had spent considerable time as a patient in hospitals under treatment for "shell shock." "Shell shock" is not a distinct type of nervous disorder, but a condition produced on certain organisms by sudden fear or by highly exciting causes. It is a form of neurosis. It is not settled, general insanity, but, according to the testimony of the expert offered by the defense, a functional nervous disease, and not due to organic changes.

The existence of a doubt as to the sanity of a defendant means, of course, any doubt that may be created in the mind of the trial court arising from a consideration of all the facts and circumstances which the situation may disclose, and he may, on his own motion, in the exercise of a sound discretion, submit the question of the defendant's sanity to the determination of a jury. Such a doubt must be supported by facts and circumstances of a substantial character. This right does not arise merely because the defendant asserts insanity, however baseless the assertion may be. To justify the dismissal of the jury or the suspension of a trial, the court must entertain a doubt founded on substantial grounds. In other words, there must exist reason to believe that the claim of insanity made on behalf of the accused is genuine and not simulated as a means of defeating or delaying the law's penalties in cases in which all other means of evading punishment would seem hopeless. The question of whether a doubt sufficient to require the trial court to submit the issue of the sanity of a

defendant to a jury during trial is one that must always rest largely within the discretion of the trial court. On principle, the question is not unlike the discretion which the law reposes in a court when it is called on to pass on the competence of witnesses to testify as to the sanity of persons generally.

For insanity to be available as a defense to crime, it must be shown by a preponderance of the evidence that the accused did not know the nature or the quality of the act which he committed, or, if he did know the nature and quality of the act, that he did not know that it was wrong to commit it. The burden of proof is always on the defendant, or on the person who asserts the insanity of another, to establish its existence by a preponderance of evidence. This universal rule is applicable to the issue of mental unsoundness or irresponsibility in every case in which it may possibly arise. The defendant in this case signally failed to meet the burden which the law imposed on him. It was after experts called on his behalf had related in his presence with minute detail the symptoms of "shell shock" and of epilepsy and the effect of each on the nervous organism, as manifested by the external actions of those thus affected, that the defendant, on resuming the witness stand, seemed to pass from a rational state into a state of faulty memory and finally into a state of apparent unconsciousness and collapse which cause a temporary cessation of the trial. Judgment of conviction affirmed.

Medical Bills Under Workmen's Compensation Law

(Sandberg v. Seymour Dress Co., Inc., et al. (N. Y.), 212 N. Y. Supp. 432)

The Supreme Court of New York, appellate division, third department, modifies an award of the state industrial board in favor of the claimant for compensation under the workmen's compensation law of that state, by striking therefrom five sums awarded as compensation to the claimant on account of medical bills of physicians, which amounted to $1,007. The court says that under section 13 of the workmen's compensation law, no claim for medical or surgical treatment is enforceable, except (1) as incidental to, or a part of, an award to an injured employee, and (2) unless, within twenty days following the first treatment, the physician or surgeon furnishing the treatment shall furnish to the employer and the industrial board a report of the injury and treatment on a form prescribed by the industrial board. This applies to every claim by a physician or surgeon for services rendered to an injured employee, payment of which is sought through an award by the industrial board, and whether employed by the employer or employee. This, of course, has no application to the right of a physician or surgeon to recover in an action at law from the employer for services rendered at his request.

Action for Penalty for Practicing Without License

(State Board of Medical Examiners v. Buettel (N. J.), 131 Atl. R. 89)

The Supreme Court of New Jersey, in reversing a judgment of nonsuit which was granted on the ground that the evidence did not sufficiently identify the defendant, says that the action was to recover a penalty prescribed for practicing medicine and surgery without first having obtained and filed a license issued by the state board. There was identity of names and of the person arrested; also proof that Buettel had his office at a certain place, where witnesses testified that they were treated by him, and that a pharmacist had received prescriptions from him. This, the court thinks, was sufficient to justify a finding that the defendant was the person charged and who had treated the witnesses as patients, although, while he had given bond for his appearance, he did not appear at the trial. The proper method of review was that observed, by writ of certiorari.

Nor does the court agree with the contention of the defendant that, having demanded a trial by jury and been refused, the nonsuit should be sustained on the ground that his constitutional right of trial by jury had been infringed. An examination of the authorities establishes beyond question that the right of trial by jury does not extend to actions for penalties for offenses of minor character unknown to the common law. The court thinks it apparent that the legislative right to deal in summary fashion with offenders under legislation for acts not in themselves criminal, enacted under the police power, is not doubted, but, where a jury has been accorded, it has been because the legislature in the particular case has not interdicted the right to a jury trial, but indicated the procedure to be under statutes in which the right is preserved.

The conclusion which the court reaches is that the act under which this proceeding was taken is a valid exercise of the legislative power, and that the legislature clearly intended that the proceeding should be heard in summary manner without a jury. That the steps in the proceeding are not fully set forth, the court thinks is not a ground on which to nullify that purpose. Where in the act they are left open, it will be presumed that the course of procedure in the trial court was intended. This does not render the act unconstitutional. The right of trial by jury is invoked according to the nature of the prohibited act and does not rest alone on the mode in which it is to be tried. It is the substance and not the form that must control in determining the right. The court in the present case sits solely by legislative mandate, and for the purposes of the trial is a statutory tribunal.

Annulment of Marriage for Concealment of Epilepsy

(Busch v. Gruber (N. J.), 131 Atl. R. 101)

The Court of Chancery of New Jersey, in granting petitioner Busch, otherwise called Gruber, a decree annulling her marriage to the defendant, says that the only question in this case was whether or not, if the defendant was afflicted with epilepsy at and before the time of his marriage to the petitioner, knew it, but represented to her that he did not have epilepsy, or concealed from her the fact that he had it, it was such a fraud as would entitle the petitioner to a decree annulling the marriage under the general equity jurisdiction of this court. It has been held that tuberculosis is such a cause; also syphilis. To warrant the court in granting a decree for fraud, the fraud imposed on the petitioner must be of a character affecting an essential of the marriage relation. It seems to this court that epilepsy falls within this doctrine as certainly as do syphilis and tuberculosis. The false representation in the case at bar consisted of the defendant's statement that he was in good health and had never been sick since he was a child and had had no occasion for a physician when, in fact, he was, and for a considerable period of time had been, an epileptic. He suppressed the truth, even if he did not make an affirmative false representation as to the particular fact of epilepsy, and the fraud for which a marriage will be annulled may be either a false suggestion or a suppression of the truth. In other words, this court is clearly of the opinion that, when a man who contracts marriage is and has been suffering from epilepsy but represents to his prospective wife that he is in good health, has never been sick, and has had no occasion for a physician, and within a short time after the marriage has epileptic fits, and his wife then for the first time discovers the disease with which he is afflicted, and straightway leaves him, having had no knowledge of his condition at or before the time of the nuptials, the wife is entitled to have the marrage annulled for fraud, notwithstanding consummation.

Death from Inhaling Carbon Monoxide Accidental Injury

(Cantor v. Elsmere Garage et al. (N. Y.), 212 N. Y. Supp. 327)

The Supreme Court of New York, appellate division, third department, says that when a physician went to a garage at 8 p. m. to get his car he saw and talked with a workman, who appeared perfectly well; nor did the physician notice any smell of gas in the garage. Shortly afterward the workman helped another to move into position, while its engine was running, a car that came in, and then he went to the door to admit another car. Soon after that it was said that he "looked funny." He fell down and made a noise two or three times, when breathing. When a physician was about to be summoned, the one mentioned above returned,

at about 9 p. m. He found the man dying. There was a strong odor of gas in the garage; the doors were closed. The physician stated that in his opinion the cause of death was carbon monoxide gas. It thus appeared that the man did not suffer from a gradual and continuous inhalation, but the infliction was quick and of short duration. He suffered an accidental injury, which arose out of the employment. The accident was the inhaling of the carbon monoxide gas, which in itself is odorless, and which had been quickly disseminated in the garage shortly before the man fell to the floor, perhaps while he was helping to push into place the car, the engine of which was running. The presence of the gas was unexpected, and, while the breathing was voluntary, the breathing of a poison gas was not voluntary. If one drinks a glass of water, apparently clear and pure, it is a voluntary act; if, however, unknown to him, this water contains a not distinguishable poison, drinking the poison is not to him voluntary, but an accident. The time when the accident occurred was fixed. It seems that there was present here every element of accident, no niches vacant, and the direct resultant injury was poison and death. The award to the widow and minor children of the workman of compensation under the workmen's compensation law should be affirmed.

Penalty Not Excessive for Illegal Sale of Morphine

(Smith v. State (Okla.), 240 Pac. R. 656)

The Criminal Court of Appeals of Oklahoma, in affirming a judgment of conviction of an illegal sale by defendant Smith of one capsule of morphine for the price of $1, says that the trial court fixed the penalty at a fine of $500 and imprisonment in the state penitentiary for five years. It was urged that the penalty assessed was excessive. But it may have developed in evidence that the defendant was an old offender. The illegal sale of narcotic drugs is a most reprehensible practice, having a debasing influence on both the seller and the buyer and on society in general, and meriting severe punishment. The penalty here assessed was not the maximum prescribed by the statute. Under such circumstances there was no showing made which would warrant this court in modifying the sentence imposed by the trial court. The court will take judicial notice that morphine is a "narcotic drug" within the definition of that term as contained in section 8886 of the Compiled Oklahoma Statutes of 1921. It is not necessary to negative the exceptions or provisos contained in the narcotic drug act in any complaint, information or indictment laid under the act.

Medical Facts and Judicial Precedents—Tuberculosis

(Fraze v. McClelland Co., et al. (Iowa), 205 N. W. R. 737)

The Supreme Court of Iowa, in affirming a judgment which allowed the plaintiff compensation, says that, while he was assisting in moving a large and heavy oak door, the door tipped and squeezed him against the wall. That was the accident. It was momentary, the door being immediately righted. He gave no cry, but immediately afterward sought a bench and lay down feeling quite sick. He later resumed his work, which he continued for three days, when he reported his condition to his foreman, who sent him to the company's physician. The physician found a small red spot on the plaintiff's chest; also, unsatisfactory internal conditions in the chest. The final development was pulmonary tuberculosis. The plaintiff had weighed from 165 to 170 pounds up to the time of his injury, but after it rapidly lost weight until he was reduced to 135 pounds. It was contended that no causal connection between the alleged injury and the tuberculosis had been shown. Two very distinguished medical specialists in tuberculosis testified hypothetically that tuberculosis results from infection and never from traumatism. They, however, did not deny, but impliedly admitted, that tuberculosis might be accelerated and "lighted up" by traumatic causes, though they also testified that the injury to the plaintiff, as described in the hypothetic question, was not adequate to such acceleration or "lighting up." The decisive turn of the case was at this point. The industrial commissioner cited decisions from the courts of last resort of three states, wherein it was found that acceleration of pulmonary tuberculosis had resulted from traumatic causes. This court is not disposed to establish or to contradict medical facts by judicial precedents. Whatever the medical facts may be, as proved in a particular case, they must control regardless of judicial precedent. In the case at bar, this court regards the evidence as close on the question of causal effect, but it thinks also that the evidence of the plaintiff was sufficiently preponderant to sustain the allowing of compensation.

Society Proceedings

COMING MEETINGS

American Laryngological Association, Montreal, Canada, June 3-5. Dr. George M. Coates, 1811 Spruce Street, Philadelphia, Secretary.

American Laryngological, Rhinological, and Otological Society, Montreal, Canada, May 31-June 2. Dr. Robert L. Loughran, 145 West 58th Street, New York, Secretary.

American Neurological Association, Atlantic City, June 1-3. Dr. Henry A. Riley, 870 Madison Avenue, New York, Secretary.

American Ophthalmological Society, Hot Springs, Va., June 14-16. Dr. Emory Hill, Professional Building, Richmond, Va., Secretary.

American Orthopsychiatric Association, New York City, June 5-6. Dr. Karl A. Menninger, Mulvane Building, Topeka, Kansas, Secretary.

American Otological Society, Montreal, Canada, May 31-June 3. Dr. Harold Walker, 390 Commonwealth Avenue, Boston, Secretary.

American Pediatric Society, Niagara Falls, Canada, May 31-June 2. Dr. Howard Childs Carpenter, 1805 Spruce Street, Philadelphia, Secretary.

American Psychiatric Association, New York City, June 8-11. Dr. Earl D. Bond, 4401 Market Street, Philadelphia, Secretary.

American Psychopathological Association, New York City, June 11. Dr. Sanger Brown II, 173 East 70th Street, New York City, Secretary.

American Therapeutic Society, Philadelphia, June 10-12. Dr. W. J. Mallory, 1720 Connecticut Ave., N. W., Washington, D. C., Secretary.

Associated Anesthetists of the United States and Canada, Nottingham, England, July 20-23. Dr. F. H. McMechan, Avon Lake, Ohio, Sec'y.

Maine Medical Association, Poland Springs, June 10-12. Dr. B. L. Bryant, 265 Hammond Street, Bangor, Secretary.

Massachusetts Medical Society, Springfield, June 8-9. Dr. W. L. Burrage, 182 Walnut Street, Brookline, Secretary.

Medical Library Association, Ann Arbor, Mich., June 8-9. Miss Harriet Wilson, 535 North Dearborn Street, Chicago, Secretary.

Montana, Medical Association of, Billings, July 16-17. Dr. E. G. Balsam, 222 Hart-Albin Building, Billings, Secretary.

National Association for the Study of Epilepsy, New York City, June 7-8. Dr. A. L. Shaw, 108B The Albiston, Utica, N. Y., Secretary.

New Jersey, Medical Society of, Atlantic City, June 17-19. Dr. J. B. Morrison, 97 Halsey Street, Newark, Secretary.

North Carolina, Medical Society of the State of, Wrightsville Beach, June 15-17. Dr. L. B. McBrayer, Southern Pines, Secretary.

Oklahoma State Medical Association, Oklahoma City, June 22-24. Dr. C. A. Thompson, 609 Barnes Building, Muskogee, Secretary.

Rhode Island Medical Society, Providence, June 3. Dr. J. W. Leech, 169 Broad Street, Providence, Secretary.

Wyoming State Medical Society, Lander, July 12-13. Dr. Earl Whedon, Sheridan, Secretary.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Twentieth Annual Meeting, held at New York March 30-April 1, 1926

(Concluded from page 1652)

Basic Factors in Human Hypersensitiveness

DRS. ROBERT A. COOKE and WILL C. SPAIN, New York: Allergy occurs in a small proportion of the population. In one such patient a 5 grain (0.3 Gm.) tablet of acetylsalicylic acid produced cyanosis, shock and death from asphyxia. Many people have no such symptoms. There exist in the blood plasma of sensitive persons substances that can be transferred to the skin of the normal person and confer a local and temporary hypersensitiveness. The patient to whom the serum has been transferred reacts as the original patient reacted. These substances are relatively stable and are present in a proportion of those suffering from clinical symptoms.

Clinical Result After the Long Continued Use of Insulin

DR. JOHN RALSTON WILLIAMS, Rochester, N. Y.: One group of patients has been studied who have been treated before and since insulin was available. Twenty-eight of these in the preinsulin period lost food tolerance, and after insulin was started twenty-seven of them gained. In the preinsulin group fifteen patients lost weight. After insulin, twenty-four patients gained weight. Before insulin, children rarely showed any growth; since insulin, children have grown rapidly and

developed normally. In regard to the fate of patients, before insulin, 66 per cent lived; since insulin treatment, 85 per cent have lived. In seventy-one diabetic patients, death occurred from complications in thirty-one cases. Insulin has been found effective in cases of indiscretions of diet. Patients have frequently passed into coma from dietary indiscretions and have been brought out of it by insulin, without apparent harm. One patient has had as many as 4,200 injections about the thighs without harm. No increased susceptibility to other diseases has been noted in any insulin cases.

DISCUSSION

DR. NELSON G. RUSSELL, Buffalo: Insulin has lessened the morbidity of diabetes in that it has improved the general condition of the patient, improved his resistance to operative shock, and improved his resistance to other diseases. It has been mentioned that diabetic patients age more rapidly, even with insulin, than do normal persons. In regard to the dosage of insulin, and whether we cannot improve further the general condition of the patients: Most patients have died as a general indirect result of underfeeding. Many persons keep to a lowered diet for some time, and then go on one grand spree, because they are delighted when the tests show lower sugar and that the dosage can be lowered. Then they become careless. I do not think in the majority of cases that one can lower the dose. Sometimes we have had to lower the dose because we have had reactions—not the regular, insulin reactions, but reactions occurring at irregular times. While we cannot come to final conclusions as to insulin for a long time yet, I think Dr. Williams has made it clear by his study of twenty-eight cases that the morbidity of the disease has disappeared. Putting his patients back to work was a remarkable result. In regard to vascular change, I think there is a definite relation between hypoglycemia and heart muscle change. I believe that definite cardiac changes can be demonstrated.

The Relation of Vitamins to Disease

DR. E. V. MCCOLLUM, Baltimore: We now recognize six vitamins, A, B, C, D, E and, in addition, one which Dr. Goldberger has named P P (pellagra preventive). Vitamin A is contained in animal fat. When it is lacking in the diet xerophthalmia, or drying of the whole conjunctival sac, exists. Bishop and Evans have found that there is ovarian disturbance. The female rat has reduced ovulation, and there is also a purulent secretion in the nasal and oral cavities. In regard to vitamin B, we are very uncertain what is the result of vitamin deficiency, but there is a profound disturbance of the peripheral nervous system. Recent evidence seems to point to the fact that there are two or more substances in vitamin B. This vitamin is found in yeast, and Goldberger thinks that yeast will cure pellagra in man and a similar disease called "black tongue" in dogs. Goldberger has made dilute alcohol extract of cornmeal, supplemented by autoclaved yeast which contains a substance indispensable for growth, but which alone does not prove to be an antineuritic substance. The pellagra preventive substance appears to be in the yeast. Vitamin C prevents scurvy, and also widespread hemorrhages in the tissues. This substance is most frequently found in the liver oil of fishes, chiefly of cod. Vitamin D deficiency is found when the diet is deficient in calcium and in phosphorus. In rickets, the blood content of phosphorus is very low; the calcium may or may not be low. If it is below 10 mg. per hundred cubic centimeters of blood, it means rickets with tetanus. Infants born in the late summer have to go through the winter with heavy clothes, deprived of much of the sun's rays, and therefore should have cod liver oil as a routine. Light of certain wave length seems to produce the same physiologic effects as does cod liver oil. The blood cholesterol is affected by ultraviolet radiation, and inert cholesterol is converted into a form physiologically active by ultraviolet rays. The antirachitic value of any substance is due to this form of cholesterol. Vitamin D is contained in an oil found in the wheat germ. Wheat germ oil does not prevent or cure rickets or other vitamin deficiency disease, but it does cure sterility in animals. Deprived of this substance, which is plentiful in cereals and in muscle tissue of animals, the rat cannot carry its young to term. This fact cannot be applied to human beings because of the widespread distribution of this substance. In the animal, lack of it produces emotion, nervousness, abnormal fear, lack of or loss of hair, tendency to destroy the young, and failure to produce milk. Probably the most important vitamin deficiency in this country is the deficiency of calcium in diet. Therefore diet should be considered in respect not only to vitamin content but also to biologic value of the proteins, and in regard to its mineral content. We must also remember the profound importance of other qualities that go to make up a satisfactory diet.

Vitamin Value of Some Common Foodstuffs

DR. WALTER H. EDDY, New York: People are interested in vitamins, proteins and carbohydrates. A housekeeper wants to know when she goes to market just what is contriubted to nutrition by carrots, beef or potatoes. Where are we going to get the vitamins that have been spoken of? We must have some quantitative assay method to measure these foods. The vitamin problem is something that has come along in the last decade. As new vitamins are discovered, all our previous measurements as to the value of a foodstuff are faulty. We have to discard them and start again in the light of new facts. Thus, we have found that bananas hold an antiscorbutic value; from 10 to 15 Gm. of bananas will protect against scurvy, but what else will it do? The diet must be complete in all known factors. We have to study the comparative value of ripe and of unripe bananas. We have found that bananas baked in their skins are even more effective than without. Oxidation tends to destroy vitamins; therefore vegetables, canned when fresh and sealed at once, have their vitamins preserved more than vegetables cooked on the stove, as the latter lose vitamins through oxidation. Vegetables put in the can go on breathing after being canned, so that after thirteen hours there is no oxygen in the can. They are taken out of the can oxygen-free. Thus, food protected from oxidation keeps its vitamin content. Apples in storage tend to lose vitamin C content, which is lost by oxidation. If steeped in 2 per cent salt solution they are better protected. This does not, however apply to peaches, which do not have an oxygen-carrying substance. Spinach is a vegetable which has a rich vitamin B content.

DISCUSSION

DR. GEORGE DOW SCOTT, New York: I was very much interested in what Dr. Eddy said about bananas. I think there is a great deal of misunderstanding in regard to the fruit, whether ripe or unripe. I have stated that a child can digest better the banana ripened on the tree, where the starch is transformed into fructose, than the banana ripened en route. The digestibility of the fruit is altered. In children having trouble with dentition I use corn meal for its carbohydrate and energy content, and I order vegetables given with the water in which they are boiled. In cases of gastrointestinal intoxication I have given raw carrot juice or turnip juice with great advantage. The teeth came more promptly and the gums improved in condition. I believe that the American diet for children has too low an inorganic salt content. By adding calcium and phosphorus, one can balance the metabolism better.

Fatigue During Work Carried on at a Regulated Rate of Speed.—Otto Graf of Munich (*Ztschr. f. d. ges Neürol u. Psychiat.* **101**:115, 1926) has found that work at a regulated speed is less fatiguing than work at volitional speed. As an instance of regulated speed, he mentions Ford's automobile factories, in which each worker's materials are moved up to and past him at a given speed, and his work must be carried out during the interval at his disposal. He ascribes this somewhat surprising outcome of his experiments to the fact that work at regulated speed necessarily allows for and enforces a large number of regular, though brief, periods of rest. The sense of monotony also is less at the regulated speed, because the attention is not allowed to flag, and the mental fatigue of constantly refocusing the attention is avoided. Graf warns against premature attempts to apply the findings of these preliminary studies generally in industry.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in America for a period of three days. No foreign journals are available prior to 1921, nor domestic prior to 1924. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

American Journal of Anatomy, Philadelphia

37: 1-179 (March 15) 1926

Polynuclear Ova and Polyovular Follicles in Opossum and Other Mammals: Problem of Fecundity. C. G. Hartman, Austin, Texas.—p. 1.

Renal Circulation: Finer Distribution. D. M. Morison, San Francisco.—p. 53.

Jugular Lymph Sac in Albino Mouse. G. M. Higgins, Rochester, Minn.—p. 95.

Relative Viability of Male and Female Mouse Embryos. E. C. MacDowell and E. M. Lord, Cold Spring Harbor, N. Y.—p. 127.

Studies in Hyperthyroidism. II. Significance of Changes in Thymus Glands of Thyroid Treated Tadpoles. C. C. Speidel, University, Va.—p. 141.

*Development of Hypophysis Cerebri in Man: Pars Tuberalis. W. J. Atwell, Buffalo.—p. 159.

Development of Hypophysis Cerebri.—Atwell's studies lead him to suggest that it seems not unlikely that certain of the tumors described by Erdheim as arising from "rests" of the craniopharyngeal duct are in fact tumors of the pars tuberalis.

American Journal of Hygiene, Baltimore

6: 197-318 (March) 1926

Extraction of Vitamin B from Wheat Germ. E. V. McCollum and H. D. Kruse, Baltimore.—p. 197.

Comparison of Pigeon and Rat as Test Subjects for Vitamin B. C. N. Laird, Baltimore.—p. 201.

Nutritional Requirements of Nursing Mothers: Rickets. A. H. Grant and M. Goettsch, Cincinnati.—p. 211.

Id. A. H. Grant, Cincinnati.—p. 228.

Variations in Fat Soluble Vitamin Content of Eggs, Resulting from Different Methods of Preservation. I. A. Manville, Portland, Ore.—p. 238.

Experimental Kala-Azar in Hamster Cricetulus Griseus M. Edw. C. W. Young, H. J. Smyly and C. Brown, Peking.—p. 254.

*Primary Toxicity of Heterophile Immune Rabbit Serum for Guinea-Pigs: Apparent Relation to Anaphylaxis. W. W. Redfern, Baltimore.—p. 276.

SUPPLEMENT

6: 1-171 (March) 1926

Female Hypopygia of Anopheline Mosquitoes: Brazilian Species. N. C. Davis.—p. 1.

Dispersion of Resting Anopheline Mosquitoes from Dwellings in Brazil. N. C. Davis.—p. 23.

Relation of Type of Soils of Alabama to Distribution of Hookworm Disease. D. L. Augustine, Andalusia, Ala., and W. G. Smillie, Boston.—p. 36.

Soil Infestation with Hookworm in Southern Alabama from October, 1923, to September, 1924. D. L. Augustine, Andalusia, Ala.—p. 63.

Accuracy in Dilution Egg Counting Method. N. R. Stoll, Baltimore, and W. C. Hausheer, New York.—p. 80.

Concerning Two Options in Dilution Egg Counting: Small Drop and Displacement. N. R. Stoll, Baltimore, and W. C. Hausheer, New York.—p. 134.

Dilution Flotation Technic for Counting Hookworm Ova in Field Surveys. F. C. Caldwell and E. L. Caldwell, Andalusia, Ala.—p. 146.

Hookworm in Ceylon: High Incidence with Moderate Degree of Infestation. J. F. Docherty, New York.—p. 160.

Cause of Death in Anaphylaxis.—The cause of death in true anaphylaxis, Redfern feels, is primarily due to contraction of the smooth musculature of the body. From his studies it seems that in primary antiserum toxicity the rapidly increased permeability of endothelial linings and cell membranes is the most significant factor. The hemorrhagic and edematous condition exhibited by the lungs, the hemorrhagic local areas in the skin, and the failure of smooth muscle to contract in vitro all substantiate this belief.

American Journal of Public Health, Albany, N. Y.

16: 207-341 (March) 1926

Analysis of Death Rate in Detroit. W. J. V. Deacon, Lansing, Mich.—p. 207.

Carbon Monoxide and Automobile Exhaust Gases. E. R. Hayhurst, Columbus, Ohio.—p. 218.

Survey of Cities by United States Public Health Service. H. S. Cumming, Washington, D. C.—p. 224.

Outbreak of Botulinus Poisoning in Solon, Ohio. E. R. Hayhurst, Columbus, Ohio.—p. 228.

Health Examination of Preschool Child. B. S. Veeder, St. Louis.—p. 236.

Possibilities in Dental Hygiene. J. DeW. Cross, Boston.—p. 234.

Renovation in Swimming Pool Control. W. D. Stovall, S. Nichols and V. E. Vincent, Madison, Wis.—p. 237.

Federal Control of Hazardous Substances. J. A. Tobey, Washington, D. C.—p. 244.

Protection of Highway Water Supplies. E. L. Waterman, Iowa City.—p. 250.

Effect of Storage and Changing Sea Water on Contaminated Oysters. C. Krumwiede, W. H. Park, G. Cooper, M. Grund, C. H. Tyler and C. Rosenstein, New York.—p. 263.

Sources of Material. E. G. Routzahn, New York.—p. 268.

Occupational Syndrome Among Workers in Zinc. C. P. McCord and A. Friedlander, Cincinnati.—p. 274.

Determining Germicidal Efficiency of Disinfectants. G. F. Reddish, Washington, D. C.—p. 283.

Functions of State Bureau of Vital Statistics. W. T. Fales, Montgomery, Ala.—p. 287.

American Journal of Roentgenology and Radium Therapy, New York

15: 193-294 (March) 1926

Physical and Biologic Problems in Heliotherapy. I. Standardization of Ultraviolet Lamps for Clinical Use. E. A. Pohle, Ann Arbor, Mich.—p. 193.

Treatment of Intra-Oral Carcinoma by Contact Application of Radium. G. W. Grier, Pittsburgh.—p. 201.

Radium Emanation in Treatment of Cancer of Tongue and Other Parts of Oral Cavity. F. E. Simpson and B. E. Flesher, Chicago.—p. 204.

*Results Obtained in One Hundred and Twenty-Seven Cancers of Tongue Treated by Radium and Roentgen Rays. B. F. Schreiner and H. F. R. Brown, Buffalo.—p. 207.

Curie Therapy of Epidermoid Carcinoma of Intra-Oral Group as Carried Out at Radium Institute, Paris. M. Lenz, New York.—p. 210.

Roentgen-Ray Study of Five Hundred Children for Thymic Enlargement. C. W. Perkins, New York.—p. 216.

Estimating Size of Thymus. F. O. Coe, Washington, D. C.—p. 222.

Similarity of Roentgen-Ray Findings in Multiple Myeloma and in Sporotrichosis. W. Altschul, Prague, Czechoslovakia.—p. 224.

Roentgenographic Demonstration of Trachea and Bronchi. P. M. Hickey and A. C. Furstenburg, Ann Arbor, Mich.—p. 227.

*Value and Safety of Simplified Method of Pneumo-Encephalomyelography. F. Liberson, New York.—p. 231.

Traumatic Coxa Vara. W. Colin, New York.—p. 242.

Results of Radiotherapy of Cancer of Tongue.—Primary cancer of the tongue has been healed by Schreiner and Brown with radiotherapy in sixteen out of forty-six cases in which the disease was localized for periods varying in time up to four years and one month. In cases showing metastases only palliation was effected. In eleven out of seventy-seven patients with metastases, the primary lesion healed; six recurred on the tongue in from two months to one year after, and the remaining five remained healed at the time of death, which was caused by metastases in the neck.

Pneumo-Encephalomyelography.—A method of simultaneous displacemont of the cerebrospinal fluid by air is described by Liberson with illustration of mechanism and technic, and its use is emphasized in cord cases, and cases other than brain tumors. The safety of the method is compared with other methods, by citing the immediate and remote after-effects as observed in forty cases.

American Journal of Tropical Medicine, Baltimore

6: 115-166 (March) 1926

*Cure of Clonorchiasis by Tartar Emetic. A. C. Reed and H. A. Wyckoff, San Francisco.—p. 115.

*Amebic Colitis: Transduodenal Medication. A. F. R. Andresen, New York.—p. 119.

*Tertiary Lesions of Frambesia Tropica, or Yaws. L. H. Bittner, Buitenzorg, Java.—p. 123.

*Experimental Rat-Bite Fever. M. Theiler, Boston.—p. 131.

*Significance of Cholesterol in Tropical Hydrocele. H. M. Stenhouse, St. Croix, V. I.—p. 143.

Occurrence of Anopheles Vestitipennis in Porto Rico. H. A. Johnson.—p. 153.

Influence of Obstacles Unconsciously Erected Against Anophelines (Housing and Screening) on Incidence of Malaria. M. F. Boyd, New York.—p. 157.

Pseudospirochetes of Leptospira. H. Vervoort, Medan, Sumatra.—p. 165.

Tartar Emetic in Clonorchiasis.—In the case reported by Reed and Wyckoff, in the final series of thirty-four intravenous injections a total of 2.3 Gm. (35 grains) of tartar emetic was given in a period of five months. In addition to and preceding this series, the patient received four intramuscular injections of tartar emetic totaling 0.26 Gm. and three intravenous injections of 1 per cent solution, totaling

0.1 Gm. No dangerous reactions were encountered. At no time did the urine show renal irritation. The first stool negative for clonorchis ova was after the fourteenth injection. After the eighteenth injection, one egg only was recovered, viz., after the twenty-third injection.

Amebic Colitis.—In amebic dysentery the active amebas are protected from destruction by the plugging up of the ulcers with débris. This plug, Andresen says, can be removed by the transduodenal enema. Powdered ipecac, given through the tube immediately after the ulcers are cleaned out, can get in its effect where most needed. Emetine, given hypodermically, may be a useful adjuvant.

Tertiary Lesions of Frambesia Tropica.—Bittner contends that rhinopharyngitis mutilans, keratoma plantare sulcatum, and juxta-articular nodules are all tertiary lesions of frambesia tropica or "yaws." Neo-arsphenamine is almost a specific in treatment of these cases.

Experimental Rat-Bite Fever.—A spirochete closely resembling *Spirochaeta morsus-muris* was demonstrated by Theiler in the blood of guinea-pigs and white mice injected with the blood taken from a typical human case of rat-bite fever. White mice and rats are readily infected with the spirochete. These animals show no symptoms but harbor the organism in the blood for a long time. Guinea-pigs inoculated with the spirochete, after an incubation period of from six to fifteen days, develop fever, enlargement of the lymph glands, inflammation and later induration of the external genitals and loss of hair. Rabbits were infected by subcutaneous, intradermal, and intratesticular injection of blood containing the spirochetes. About half of the animals used developed no symptoms, but their blood was infective for guinea-pigs for three weeks after inoculation. In the serum of infected rabbits, strong spirocheticidal properties are developed.

Significance of Cholesterol in Lymph Stasis.—Stenhouse is of the opinion that cholesterol has something to do with the production of lesions associated with, characterized by or resulting from an obstruction of lymph channels, and that it is the cholesterol that causes the obstruction.

Archives of Dermatology and Syphilology, Chicago

13: 465-600 (April) 1926

*Use of Mercurochrome-220 Soluble in Treatment of Infectious Diseases of Skin. H. H. Young, J. H. Hill and W. L. Denny, Baltimore.—p. 465.
Lichen Planus Erythematosus. C. D. Freeman, St. Paul.—p. 489.
*Syphilitic Alopecia: Relation to Neurosyphilis. U. J. Wile and G. H. Belote, Ann Arbor, Mich.—p. 495.
*Blood Cholesterol Findings in Syphilis and Other Skin Diseases. I. Rosen and F. Krasnow, New York.—p. 506.
*New Application for Varicose Ulcers. R. H. Davis, St. Louis.—p. 519.
Mycosis Fungoides and Kindred Conditions. W. J. Highman, New York.—p. 522.

Mercurochrome in Treatment of Infectious Diseases of Skin.—Of twenty-four patients with erysipelas treated by Young, Hill and Denny, twenty were cured or greatly improved; of eleven patients with furuncles and carbuncles, ten were cured and one greatly improved; of four cases of chancroidal ulcerations, all healed rapidly; of thirty-six patients with cellulitis and abscesses, twenty-one recovered promptly with no other treatment, and nine showed marked improvement and recovery after mercurochrome therapy, other treatment also being given; in two cases of gas gangrene, the infection was eliminated; in one patient with diabetic gangrene, an accompanying infection was checked; three patients with pemphigus showed marked improvement, two of them so far without relapse; of four patients with psoriasis, two are apparently cured, one markedly improved, and one improved, but with a relapse; one patient with eczema is temporarily improved; in one case of syphilis with exterior skin lesions, the lesions were healed; of forty-four patients with leprosy, twenty-eight were improved, with remarkable disappearance of the skin ulcers.

Syphilitic Alopecia.—Wile and Belote assert that syphilitic alopecia of the essential type has a high associated incidence of meningeal syphilis, as indicated by spinal fluid findings. Microscopic study shows that the essential syphilitic alopecia is not due to any local pathologic disturbance of the scalp, or more specifically, of the follicular apparatus. It is therefore not a true syphilid. Clinical analogy affords the suggestion that it is due to endocrine dysfunction, as a result of association and involvement of the autonomic nervous system. Symptomatic alopecia representing a smaller group of the entire syndrome is a true syphilid, apparently caused by a perifollicular plasmoma.

Blood Cholesterol in Syphilis.—The blood cholesterol was found by Rosen and Krasnow to be low in 100 per cent of patients with untreated primary syphilis, 50 per cent of the secondary cases in which treatment was not done, and in 25 per cent of the untreated tertiary cases in which treatment was not done. After treatment all primary cases showed a rise in the cholesterol content to normal or above normal, whereas in some of the secondary and tertiary cases the content remained low. The cholesterol content in 60 per cent of pregnant syphilitic women showed a high cholesterol value, 35 per cent a normal value and 5 per cent a low value. The blood cholesterol content in two infants with active manifestations of syphilis was low. The blood cholesterol content in 82 per cent of the treated patients who had congenital syphilis was normal. There seems to be no direct connection, at least as far as these studies are concerned, between the cholesterol content of the blood and the results of the Wassermann reaction. The cholesterol content of the blood was high in psoriasis and dermatitis venenata and normal in acne vulgaris, dermatophytosis and dermatitis seborrheica.

Treatment of Varicose Ulcers.—Very encouraging results are reported by Davis from the use of a solution containing 63 Gm. of boracic acid and 28 Gm. of solid potassium hydroxide to 200 cc. of water in the treatment of varicose and traumatic ulcers.

Archives of Neurology and Psychiatry, Chicago

15: 407-536 (April) 1926

*Pathology of Paralysis Agitans. C. M. Byrnes, Baltimore.—p. 407.
Sensory Disturbances in Tumors of Cervical Spinal Cord. F. Tilney and C. A. Elsberg, New York.—p. 444.
*Gross Pontile Bleeding in Traumatic and Nontraumatic Cerebral Lesions. G. Wilson and N. W. Winkelman, Philadelphia.—p. 455.
*Correction of Colloidal Gold Solutions as Applied to Lange Reaction. N. Novick, New York.—p. 471.
Delayed Posttraumatic Intracranial Compression. A. O. Wilensky, New York.—p. 475.

Pathology of Paralysis Agitans.—Byrnes examined the muscular tissue obtained by biopsy from fourteen cases of paralysis agitans and from one case of the postencephalitic parkinsonian syndrome. In the paralysis agitans cases he found a lesion of the neuromuscular bundle which has not been described previously in this or in any other disease. It is characterized by edema, early degeneration of the intrafusal nerve and final disintegration of the entire spindle. The intramuscular nerve trunks are normal, and the surrounding musculature is, as a rule, unaltered. The lesion in the neuromuscular bundle is, therefore, essentially neuropathic and involves a specific system of proprioceptive nerve terminals. Although studied in a variety of diseases, no lesion similar to that observed in paralysis agitans has been discovered in the neuromuscular bundle. There is reason to believe that the lesion is a toxic parenchymatous degeneration of the intrafusal nerve terminals. The cause of the lesion is not known.

Pontile Hemorrhage in Cerebral Lesions.—Wilson and Winkelman report thirteen cases, each of which presented pontile hemorrhage, usually multiple; in addition, every brain showed an extrapontile lesion. Of the thirteen cases, five were traumatic, four vascular, three neoplastic and one an abscess. This series of cases of bleeding into the pons is taken from 129 necropsies, of which twenty-six were traumatic, forty vascular, fifty-two tumors and eleven abscesses, making the incidence about 10 per cent.

Titration of Colloidal Gold Solution.—A method of titration of a good colloidal gold solution, a 1 per cent sodium chloride solution to the extent of 1.7 cc. as an indicator being used, is suggested by Novick. This salt is an electrolyte and a precipitant of colloidal solutions, and serves as an accurate and highly satisfactory indicator of the reaction state of a prepared colloidal gold solution.

Archives of Ophthalmology, New Rochelle, N. Y.

55: 103-211 (March) 1926

Phaco-Anaphylactic Endophthalmitis. A. Rötth, Pécs, Hungary.—p. 103.
Globular Masses on Pupillary Margin in Acute Circumscribed Chorioretinitis. H. Friedenwald and J. S. Friedenwald, College Park, Md. —p. 113.
Basophilic Staining of Bruch's Membrane. F. H. Verhoeff and R. J. Sisson, Boston.—p. 125.
Large Exostosis of Orbit Successfully Removed by Operation. A. Knapp, New York.—p. 128.
Case of Melanosarcoma of Palpebral Conjunctiva. W. C. Posey, Philadelphia.—p. 131.
Case of Keratitis Punctata Superficialis Improved by Use of Conjunctival Flaps. A. L. Brown, Cincinnati.—p. 136.
Neoplasms of Lacrimal Gland: Three Cases. A. O. Pfingst, Louisville, Ky.—p. 139.
Serous Tenonitis. G. N. Brazeau, Milwaukee.—p. 152.
Use of Slit Lamp in Differential Diagnosis Between Glioma and Pseudoglioma. T. H. Butler, Birmingham, England.—p. 155.
Diagnosis of Intra-Ocular Tumors. E. E. Blaauw, Buffalo.—p. 159.

Boston Medical and Surgical Journal

194: 569-612 (April 1) 1926

Tumors of Bladder. J. H. Cunningham and R. C. Graves, Boston.—p. 573.
Diverticulitis of Sigmoid or pelvic Colon with Sigmoidovesical Fistula. J. W. Keefe, Providence, R. I.—p. 577.
*Infectious Muscular Erosion: End-Result in Lumbar Region. M. Wolfson and L. Bryan, San Francisco.—p. 586.

Infectious Muscular Erosion.—Wolfson and Bryan trace a deep seated abscess in the right lumbar muscles and under the iliac crest, which yielded about a pint of foul smelling blood, degenerated tissue and pus, to an inflamed perforated retrocecal appendix. Associated with this trouble was a hernia of the ascending colon and cecum through the lumbar muscles posteriorly into a large hernial sac.

Journal of General Physiology, Baltimore

9: 387-601 (March 20) 1926

Transport of Gas by Blood of Turtle. F. C. Southworth, Jr., and A. C. Redfield, Boston.—p. 387.
Physiologic Ontogeny. VII. Concentration of Organic Constituents and Calorific Value as Functions of Age. H. A. Murray, Jr., New York. —p. 405.
Speed of Toxic Action of Arsenic in Silkworm. F. L. Campbell, Boston. —p. 433.
Light Titrations. I. Starch-Iodine Reaction. J. Field, 2nd, and L. G. M. Bass-Becking, Stanford University, Calif.—p. 445.
Salt Error of Indicators Caused by Standard Alkaline Buffers Themselves. J. W. McBain, O. E. Dubois and K. G. Hay, Bristol, England. —p. 451.
Temperature Characteristics for Prepupal Development in Drosophila Melanogaster. C. I. Bliss, New York.—p. 467.
Resistance of Living Organisms to Digestion by Pepsin or Trypsin. J. H. Northrop, New York.—p. 497.
Temperature and Locomotion in Planaria. W. H. Cole, Worcester, Mass. —p. 503.
Synthetic Food Medium for Cultivation of Drosophila. R. Pearl, Baltimore.—p. 513.
Reversal of Phototropism in Diemyctylus Viridescens. T. J. B. Stier, Cambridge, Mass.—p. 521.
Distribution of Critical Temperatures for Biologic Processes. W. J. Crozier, Cambridge, Mass.—p. 525.
Distribution of Temperature Characteristics for Biologic Processes: Critical Increments for Heart Rates. W. J. Crozier, Cambridge, Mass. —p. 531.
Modification of Temperature Characteristics. W. J. Crozier and T. J. B. Stier, Cambridge, Mass.—p. 547.
Mechanism of Accumulation of Dye in Nitella on Basis of Entrance of Dye as Undissociated Molecules. M. Irwin, New York.—p. 561.
Effects of Certain Heavy Metals on Respiration. S. F. Cook, Cambridge, Mass.—p. 575.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

27: 1-92 (Feb.) 1926

*Experiments with Anesthetic Gases. W. E. Brown and W. E. Henderson, Toronto, Ont.—p. 1.
*k-Strophanthidin Emesis in Cats with Denervated Hearts: Seat of Action. M. Dreshach and K. C. Waddell, Albany, N. Y.—p. 9.
Effects of General Anesthesia on Muscular Activity of Gastro-Intestinal Tract: Ether, Chloroform, Ethylene and Nitrous Oxide. G. H. Miller, Iowa City.—p. 41.
Acute Toxicity of Ephedrine. K. K. Chen, Peking.—p. 61.
Effect of Repeated Administration of Ephedrine. K. K. Chen, Peking. —p. 77.
Effect of Ephedrine on Digestive Secretions. K. K. Chen, Peking.—p. 87.

Anesthetic Gases.—Brown and Henderson point out that the methane series will probably not yield an anesthetic gas. Propylene appears a better anesthetic than ethylene, the percentage required being slightly more than half that needed with ethylene. Owing to the large amount of oxygen that can be supplied there is evidence that the metabolic effects of anesthesia are decreased to a minimum with propylene.

Emetic Action of Strophanthidin.—When kombé and hispidus strophanthin, and cymarin are hydrolyzed, a cleavage product, strophanthidin (or strophanthigenin), is produced. This substance retains the pharmacodynamic properties of the original glucosides in a general way, but it differs from them in that it is more easily eliminated, or somehow made inactive. Of the various effects which it can produce, the emetic action is very prominent. The emetic action has been studied especially by Dresbach and Waddell, and particularly with reference to the heart as its possible seat. It is concluded that, as the emetic action persists consistently in cats with denervated hearts, the seat of action is not in the heart, or at least not entirely in that organ. Evidence is presented in opposition to the idea that strophanthidin emesis is reflex, and the opinion is offered that it is entirely central. The bearing of this conclusion on the explanation of the emetic action of digitalis bodies in general is pointed out.

27: 93-180 (March) 1926

Comparative Studies of Propylene, Ethylene, Nitrous Oxide and Ether. C. Reynolds, New Orleans.—p. 93.
*Acute Aniline Poisoning. I. Experimental. A. G. Young, Ann Arbor, Mich., C. W. Muehlberger and W. J. Meek, Madison, Wis.—p. 101.
Id. II. Hematologic Studies. A. G. Young, Ann Arbor, Mich.—p. 125.
*Id. IV. Toxicologic and Hematologic Studies of Acetanilid Poisoning. A. G. Young, Ann Arbor, Mich., and J. A. Wilson, Madison, Wis.—p. 133.
Effects of Carminative Volatile Oils on Muscular Activity of Stomach and Colon. O. H. Plant and G. H. Miller, Iowa City.—p. 149.
Nephropathic Action of Dicarboxylic Acids and Their Derivatives: Alkyl-, Hydroxy- and Keto-Acids. R. C. Corley and W. C. Rose, Urbana, Ill. —p. 165.

Acute Aniline Poisoning.—Experimental production of acute and chronic aniline toxemia failed to produce methemoglobin as shown by spectroscopic and chemical analysis. In the acute stage of aniline intoxication, there is a relative increase in erythrocytes, hemoglobin and oxygen capacity, with a very low blood pressure simulating a condition of shock. Chronic aniline poisoning produces an anemia with the accompanying symptoms, as emaciation and weakness. The brownish discoloration of the blood and urine is due to the presence of paraminophenol, which is held in the blood plasma and which does not influence the oxygen capacity of the blood. Hence, Young says, in aniline poisoning (especially in the acute stage) cardiac and not respiratory treatment is indicated.

Acetanilid Poisoning.—Young and Wilson assert that the action of acetanilid on the heart, blood and circulation is essentially the same as that of aniline. Acetanilid, like aniline, forms paraminophenol in the blood plasma and urine. This may account in part for the cyanosis observed in acetanilid poisoning. Prolonged administration of sublethal doses of acetanilid produces anemia and emaciation. The fall in the red cell count, hemoglobin and oxygen capacity is parallel. The first toxic action on the heart appears to be a change in the conduction mechanism. The type of change and amount depends on the rate of injection as well as the amount of drug given. Acetanilid in aqueous solution in amounts sufficient to produce the cardiac changes described do not influence the respiration to any appreciable extent.

Journal of Urology, Baltimore

15: 219-339 (March) 1926

*Epidural Anesthesia for Perineal Prostatectomy. E. C. Shaw, Baltimore. —p. 219.
*Pyelovenous Back Flow. Fate of Phenolsulphonphthalein in Normal Renal Pelvis with Ureter Tied. F. Hinman and M. Vecki, San Francisco.—p. 267.
Calcified Renal Cyst. T. J. Kirwin, New York.—p. 273.
Gonorrheal Infection of Kidneys: Case. A. Kemble, Washington, D. C. —p. 289.
Urethral Mucosa and Glands. E. W. Hirsch, Chicago.—p. 293.
Routine Method of Determining Complete Cure of Gonorrhea in Male. J. M. Young, St. Louis.—p. 313.
*Unusual Bladder Obstruction. W. J. Wallace, Oklahoma City.—p. 325.
Strangulation of Pelvis. V. Vermooten, Baltimore.—p. 333.

Epidural Anesthesia for Perineal Prostatectomy.—Extradural injections of various quantities of methylene blue solution were made by Shaw in eleven fresh cadavers in an effort to determine the upward extension of solutions injected

through the sacral hiatus. It was found that from 15 to 20 cc. completely filled the extradural space in the sacral canal and that solution in excess of this quantity extended into the thoracic and lumbar regions of the vertebral canal. In 100 cases of perineal prostatectomy, extradural nerve block anesthesia was effected. There was 17 per cent failures to anesthetize completely. Best results were obtained with from 15 to 20 cc. of 3 per cent solution of procaine. The blood pressure was found to be the best indicator of the patient's condition. The systolic blood pressure frequently fell from 30 to 50 mm. without any change in the patient's appearance. Practically no reaction occurred in the patients receiving from 15 to 20 cc. of 3 per cent procaine. The ultimate mortality was 3 per cent. None of the deaths were attributable to anesthesia. In Shaw's opinion, the supplementation of extradural block with transsacral injection is unnecessary.

Pyelovenous Back Flow.—Hinman and Vecki assert that the content of a closed hydronephrosis is neither cumulative nor stagnant, but undergoes a continuous change, fresh material being secreted by the kidney and the excess removed by an active reabsorption, which occurs mainly through pyelovenous back flow.

Fibrous Partition in Bladder Causes Obstruction.—Wallace reports a case in which the cause of the obstruction was a fibrous partition or diaphragm extending from a point one-half inch (13 mm.) to the left of the internal sphincter forward to a point just behind the left ureteral orifice, whence it passed along the interureteric ridge, stopped just short of the right ureteral orifice, and had an attachment at a point one-eighth inch (3 mm.) from the right internal sphincter. It was a firm thin membrane about 1 inch (2.5 cm.) high and not more than one-twentieth inch (1 mm.) in thickness. It constituted a distinct diaphragm or septum, which divided the bladder into two portions, each one of which was capable of holding a considerable amount of urine. Under the influence of straining, this fibrous band was drawn downward toward the internal sphincter, so that it practically occluded the urethral orifice, and thus prevented normal emptying of the bladder.

Maine Medical Association Journal, Portland

17: 43-62 (March) 1926

Problem of Subnormals in Maine. S. E. Vosburgh, West Pownal.—p. 43.
Toxicoderma. B. F. Felden, Portland.—p. 49.
Public Health Examination. H. Jameson, Rockland.—p. 55.

Minnesota Medicine, St. Paul

9: 151-216 (April) 1926

*Urinary Antisepsis. E. Davis, Omaha.—p. 151.
*Hexylresorcinol in Urinary Tract Infections in Women. H. M. N. Wynne, Minneapolis.—p. 156.
Urology in Surgical Differential Diagnosis. A. E. Sohmer, Mankato.—p. 161.
Cauda Equina Lesion. J. C. Hultkrans, St. Paul.—p. 169.
*Occurrence of Froin Syndrome in Diversified Spinal Lesions. G. R. Kamman, St. Paul.—p. 173.
*Pulmonary Embolism. S. F. Herrmann, Welcome.—p. 180.
*Causes of Death in Diabetes Mellitus. A. H. Beard, Minneapolis.—p. 184.
Legal Pointers. W. H. Oppenheimer, St. Paul.—p. 186.
Full-Time Clinical Teaching. E. P. Lyon, Minneapolis.—p. 189.
Public Health in Minnesota. O. E. Locken, Crookston.—p. 194.
Requirements for Admission to State and County Sanatoria and Sanatorium Supervision by Tuberculosis Division of Department of Public Institutions. L. G. Guyer, St. Paul.—p. 198.

Urinary Antisepsis.—Davis discusses the drugs with laboratory findings such as to indicate a theoretical clinical value and which will cause the secretion of the antiseptic urine by normal human individuals. Chlor-mercury fluorescein has not as yet received a thorough clinical trial. Acriflavine is of distinct clinical value in acute urinary infections, but gives results in chronic infections that are inconstant and not permanent. Furthermore, chemically pure acriflavine is obtained with difficulty, and gastro-intestinal symptoms are not infrequent. Mercurochrome-220 soluble seems to have given good results in some cases, but is not dependable. Besides, there are severe reactions associated with the intravenous administration of mercurochrome. It is excreted in the urine only in small percentage. Mercurochrome is of definite and proved value in the form of local instillations into the bladder or posterior urethra. Hexylresorcinol is of splendid experimental promise, but awaits clinical confirmation. Promiscuous medication with so-called urinary antiseptics without painstaking investigation to eliminate mechanical or systemic causes of infection is distinctly contraindicated.

Hexylresorcinol in Urinary Tract Infections in Women.—The clinical evidence reported by Wynne is said to support the claim that hexylresorcinol exerts a distinct antiseptic action in the urine of patients suffering from urinary tract infections whether due to coccal or bacillary infections. This action is apparently sufficient to disinfect completely the urinary tract in some cases.

Occurrence of Froin Syndrome.—The syndrome of xanthochromia and massive coagulation, or the Froin syndrome, consists of a yellow spinal fluid which coagulates spontaneously on standing. Kamman observed the syndrome of xanthochromia and massive coagulation (*a*) above and below tumors of the spinal cord, (*b*) in diffuse syphilitic lesions of the central nervous system, and (*c*) in a case of cord compression by an extradural abscess.

Pulmonary Embolism.—In the presence of known thrombosis, or when an unexplained slight postoperative fever suggests the possibility of hidden thrombosis, Herrmann says the development of embolism should be kept in mind. The distinctive feature in each of seven cases reported, which should suggest the diagnosis of embolism, was the very abrupt onset. Initial symptoms are: sudden anxiety and restlessness, with dyspnea, tachycardia, precordial oppression, persistent belching, and a shocklike state with rapid soft pulse, cold extremities, and profuse perspiration. In the course of several hours there follow pleuritic pain, fever, bloody sputum, and the appearance of a dull area in the chest, especially over the right lower lobe, with distant or absent breath sounds, and often a friction rub. The bronchial breathing and râles of pneumonic consolidation are lacking. Cyanosis is extreme in massive embolism.

Causes of Death in Diabetes.—Whereas 75 per cent of deaths in cases of diabetes before the advent of insulin were caused by coma, today the greater number of deaths are due to cardiovascular diseases. As a result, many cases can be prevented or postponed by the proper education of the patient. The responsibility of the doctor rests in the early detection of typical symptoms and laboratory findings of acidosis.

New York State Journal of Medicine, New York

26: 293-334 (April 1) 1926

Etiology of Cancer. I. Levin, New York.—p. 293.
Surgical Exposure of Deepseated Inaccessible Neoplasms for Proper Implantation of Radium. P. E. Durham, New York.—p. 301.
*Stoffel Operation for Spastic Paralysis. P. Lebreton and R. M. Cleary, Buffalo.—p. 307.
*Treatment of Scarlet Fever. P. A. Bly, Rochester.—p. 309.
Influenza and Measles, Their Epidemiologic Similarity. E. S. Godfrey, Jr., New York.—p. 312.

Stoffel Operation for Spastic Paralysis.—Lebreton and Cleary have operated on seventeen patients with spastic paralysis. Five were hemiplegias and the remainder mostly paraplegias. In eight cases the internal popliteal nerve was attacked; in five, the obturator; in three the median, and in one the sciatic nerve. There were no infections. One boy died soon after operation, the cause of death being acute tonsillitis, endocarditis and general septicemia. The necropsy showed clean wounds over the obturator nerves. Excluding this one case, there remained sixteen cases, of which one half could be classified as good results. Four showed only fair results, and four poor results.

Treatment of Scarlet Fever.—The thirty-four cases reported by Bly are divided into three groups: Twelve patients received convalescent whole blood, with a mortality of 25 per cent. Of these, eight were in desperate condition. Two of the fatal cases showed hemolytic streptococci in the blood culture, while acute nephritis caused the third death. Ten patients received convalescent blood serum; all recovered. Twelve patients received Dochez' serum; all recovered. Dochez serum appeared to bring about a more rapid improve-

ment in the symptoms of the toxemia, and, particularly, an earlier disappearance of the exanthem. Every patient was kept in bed at least twenty-one days, counting from the first day of illness. In the absence of renal involvement, the drinking of generous amounts of water was urged. Frequent washing of the lower bowel with physiologic sodium chloride solution is done. When the angina is severe, the necessary amount of water may be introduced in this way. Believing that attention to the throat and nasopharynx decreases the incidence of middle ear involvement, Bly very gently flushes out the nasopharynx, and then the fauces are painted with a 20 per cent solution of mild silver protein. All this is done six or eight times in the twenty-four hours. In 1,133 patients with scarlet fever treated at the Rochester Municipal Hospital, otitis media occurred in 7.95 per cent. Nephritis was a complication in 1.63 per cent of the cases.

Ohio State Medical Journal, Columbus

22: 297-374 (April 1) 1926

Differential Diagnosis of Brain Tumor: What May Be Expected from Surgery. C. E. Locke, Jr., Cleveland.—p. 301.
*Nonspecific Protein Therapy (Milk) in Treatment of Certain Diseases of Skin and Syphilis. H. V. Weirauk, Columbus.—p. 305.
Autoserum Treatment of Chronic Encephalitis. A. D. Finlayson and L. J. Karnosh, Cleveland.—p. 309.
Relation of Practicing Physician to Preventive Medicine. H. J. Powell, Bowling Green.—p. 314.
Is Cesarean Section Ever Justifiable When Child Is Dead? M. Millikin, Hamilton.—p. 317.
Vesical Calculi. E. R. Gillette, Toledo.—p. 319.

Nonspecific Protein Therapy of Carbuncles and Syphilids.—In Weirauk's opinion, milk injections constitute the method of choice for treating carbuncles. The favorable effect, if such is forthcoming, manifests itself promptly, and such an effect will be secured in a majority of cases. If there is no improvement after two or, at a maximum, four days, the case can be handled surgically. The same conclusions are justified with reference to cases of furunculosis. Syphilitic skin lesions show marked improvement or even complete regression following a course of milk injections. The latter, also, appear to be productive of good results in the management of old syphilitic patients who have been victims of overtreatment to their own physical detriment.

Oklahoma State Medical Association Journal, Muskogee

19: 84-111 (April) 1926

Cirrhosis of Liver. R. Q. Atchley, Tulsa.—p. 84.
Laennec. L. A. Riely, Oklahoma City.—p. 86.
Rural Obstetrics and Pediatrics. L. S. Blachy, Oklahoma City.—p. 90.
Management of Toxic Goiter. M. E. Stout, Oklahoma City.—p. 96.
Nervous Mechanism of Digestion. A. W. White, Oklahoma City.—p. 98.

Philippine Islands Medical Association Journal, Manila

6: 37-76 (Feb.) 1926

Pathology of Leprosy. H. W. Wade.—p. 37.
Medical Work at Culion Leper Colony. J. N. Rodriguez.—p. 42.
*Ascaris Nephritis. C. M. Africa and M. P. Mendoza-Guazon.—p. 49.

Ascaris Nephritis.—The view that ascarides secrete toxic substances that are absorbed by the host, Africa and Guazon assert, should be given thoughtful consideration, as they may be a factor in the production of serious lesions of obscure causation found not infrequently in remote organs accompanying heavy *Ascaris* infestation. This may afford a better explanation of the toxic symptoms of ascariasis than the mere theory of "reflex action."

Philippine Journal of Science, Manila

29: 305-445 (March) 1926

*Serologic Analysis of Lepers' Serums. O. Schöbl and J. Ramirez, Manila.—p. 305.
Effect of Castration on Pulling Power and Endurance in Guinea-Pigs. M. D. Sumulong, Manila.—p. 327.
Flora of Banguey Island. E. D. Merrill, Manila.—p. 341.

Serology of Lepers' Serums.—Ninety-two lepers were examined serologically by Schöbl and Ramirez with the view to deciding certain doubtful points in the serology of leprosy. Slight individual differences were found to exist in lepers' serums and in normal human serums alike as to content of natural hemolysins and complement, but no distinct quantitative differences were found between the serums of lepers and those of normal persons. The amount of hemolytic complement in the lepers' serums was found to be the same as that in the serum of nonlepers and is subject to individual variations.

Physical Therapeutics, Baltimore

44: 131-194 (March) 1926

Vascular Relaxation of Splanchnic Area: Effects on Organs Involved. M. L. H. A. Snow, New York.—p. 131.
Mechanical Vibration. W. Martin, Atlantic City, N. J.—p. 143.
Clinical Value of Static Currents. C. R. Brooke, New York.—p. 150.
Exercise and Mental Development. H. E. Stewart, New Haven, Conn.—p. 158.
History of American Electrotherapeutic Association. G. B. Massey, Philadelphia.—p. 160.

Radiology, St. Paul

6: 181-272 (March) 1926

Special Training for Physicians in Roentgenology. G. Holzknecht, Vienna.—p. 181.
Relation of Roentgenologist and Surgeon. L. Frank, Louisville.—p. 187.
Report of Committee on Standardization of Roentgen-Ray Measurements. E. C. Ernst and others.—p. 191.
Imperfections of Stereoscopic Maneuver in Radiography of Chest. J. J. Waring and W. W. Wasson, Denver.—p. 198.
Cholecystography by Oral Method. L. Levyn and A. H. Aaron, Buffalo.—p. 204.
Roentgen-Ray Examination of Joints of Hemophiliacs. H. P. Doub and E. C. Davidson, Detroit.—p. 217.
Fractures of Os Calcis. H. R. Conn, Akron, Ohio.—p. 228.
Studies of Roentgen-Ray Erythema of Human Skin. E. A. Pohle, Ann Arbor, Mich.—p. 236.
Radiotherapy of Cancer of Uterine Cervix. J. Muir, New York.—p. 246.
Extremity Technic. E. C. Jerman, Chicago.—p. 252.
Double Gallbladder. B. H. Nichols, Cleveland.—p. 255.
Kidney Stones: Case. J. S. Derr, Atlanta, Ga.—p. 256.
Recurring Mucous Cyst of Stomach. J. D. Camp, Boston.—p. 257.

Rhode Island Medical Journal, Providence

9: 49-64 (April) 1926

*Reactions Following Use of Quinidine. B. Gordon, Philadelphia.—p. 49.
Fifty Cases of Pyelitis in Children. R. M. Lord, Providence.—p. 51.

Serious Reactions Following Use of Quinidine.—Gordon reviews some experimental work done to determine the cause of sudden or unexpected deaths following quinidine administration. As a result of these experiments, it was found that quinidine has a peripheral depressant effect on the respiratory apparatus of cats, which proves fatal at a time when the heart, though somewhat intoxicated, is still viable. Stimulation of the respiratory mechanism by caffeine, combined with artificial breathing, provides a satisfactory means of preventing such fatalities. There is positive evidence of heart muscle intoxication and vasodilator effect following the use of the drug. However, the respiratory paralysis cannot be explained in any other way than as a specific effect on the respiration and not as the indirect result of the low blood pressure. Successful methods of resuscitation substantiate this view. Experience in the clinic with one patient, who died following quinidine therapy and who showed respiratory embarrassment some hours before death, makes it seem likely that the means of resuscitation resorted to in these experiments might be used in human cases. It is suggested that artificial respiration be employed with caffeine intravenously in doses comparable to the amount used in the animal experiments (about 0.5 Gm. intravenously for the average adult).

Southwestern Medicine, Phoenix, Ariz.

10: 93-150 (March) 1926

Hospital Organization. W. Wylie, Phoenix.—p. 99.
Blood Cell Volume Index in Pulmonary Tuberculosis. P. B. Newcomb, Tucson.—p. 108.
Preparation of Patient for Surgery to Insure Safety and Comfort. R. J. Stroud, Tempe.—p. 111.
Eye in Nervous Disease. W. A. Schwartz, Phoenix.—p. 116.
Interrelationship of Urologic Conditions and Diabetes Mellitus. C. S. Vivian, Phoenix.—p. 119.
Recent Advancements in Roentgen-Ray Diagnosis of Gallbladder Disease. W. W. Walkins, Phoenix.—p. 121.
Indications for Operative Procedure of Gallbladder. C. S. Vivian, Phoenix.—p. 123.
Nonsurgical Drainage of Gallbladder. G. E. Goodrich, Phoenix.—p. 124.
Gunshot Wound of Neck: Partial Division of Cervical Cord; Death. J. A. Hardy, El Paso, Texas.—p. 125.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Australian Journal of Experimental Biology and Medical Science, Adelaide

3: 1-43 (March) 1926

Surface Tension Changes Which Underlie Muscular and Ameboid Movement. O. W. Tiegs.—p. 1.
Enzymes of Hydatid Cyst. G. R. Cameron.—p. 11.
Refrigeration of Meat: Beef. G. A. Cook, E. F. J. Love, J. R. Vickery and W. J. Young.—p. 15.
*Blood Grouping of Australian Aboriginals. J. B. Cleland.—p. 33.
*Effect of Thyroid Feeding on Estrus Cycle of Guinea-Pig and Mouse. G. R. Cameron and A. B. P. Amies.—p. 37.

Blood Grouping of Australian Aboriginals.—Among 101 natives thus far examined by Cleland in Southern Australia, no member of group IV or group III (Jansky's classification) has been encountered.

Effect of Thyroid Feeding on Estrus Cycle.—Cameron and Amies aver that the administration of thyroid extract causes in mice an increase in the duration of estrus and in the length of the whole cycle. In the guinea-pig, there is a marked change in the length of estrus, but no striking increase in the duration of the cycle.

British Journal of Medical Psychology, London

5: 257-367 (April) 1926

Spinoza's Anticipation of Recent Psychologic Developments. M. H. Smith.—p. 257.
Neurotic Character. E. Glover.—p. 279.
Psychiatry as Objective Science. T. Burrow.—p. 298.
Clinical Aspects of Certain Emotions. D. E. Core.—p. 310.
Francis Thompson: Psycho-Analytic Study. E. F. Sharpe.—p. 329.
Psycho-Analytic Study of Phantasy of St. Thérèse de l'Enfant Jésus. J. F. G. Duff.—p. 345.

British Medical Journal, London

1: 641-682 (April 10) 1926

Endocarditis. H. T. Horder.—p. 641.
Surgery of Jejunum. J. Adams.—p. 646.
*Effect of Exercise on Insulin Action in Diabetes. R. D. Lawrence.—p. 648.
*Kastle-Meyer Test for Detection of Blood. J. Glaister, Jr.—p. 650.
*Maldevelopment of Esophagus. R. Theron.—p. 652.
*Suppurating Gonococcal Epididymitis. P. C. P. Ingram.—p. 653.
*Carbon Monoxide Poisoning. J. A. Hunter.—p. 653.
Acute Hemorrhagic Pancreatitis with Epigastric Hernia. D. S. Fairweather.—p. 654.

Effect of Exercise on Insulin Action in Diabetes.—Lawrence found that the immediate effect of exercise in increasing the fall of sugar caused by insulin is very great. This occurs only during the maximum period of insulin activity—that is, from one to four hours after injection. Severe and prolonged exercise, and half the usual dose of insulin, may produce as great a fall of blood sugar as the usual dose without exercise. Besides the immediate fall of blood sugar, exercise causes insulin to burn more carbohydrate than usual and to deplete the body stores of carbohydrate. For this reason the dose of insulin succeeding exercise has often an unusually powerful effect in producing hypoglycemia. If the diet is kept constant, an increase of exercise over days and weeks allows a reduction of insulin to be made. This is one of the reasons why the dose of insulin can often be reduced early in treatment when patients leave the hospital and adopt a more active existence. If this reduction is not made, symptoms of hypoglycemia appear. When the added exercise is omitted, the insulin must be raised again.

Kastle-Meyer Test for Detection of Blood.—From experiments with this test applied medicolegally by Glaister, it would appear that it is very delicate and reliable in the detection of hemoglobin. It is apparently a worthy substitute for Day's test. With the Kastle-Meyer test there are no "borderline" results. The reaction is well marked, is practically immediate, and time is economized in not having to await soakage of the stains before applying the test, if the watch-glass method is utilized. The age of the stain does not apparently affect the delicacy of the test. The test should be used in conjunction with the microscopic examination of stains for the detection of the presence of mammalian blood corpuscles and the precipitin or serologic test in determining the source of the blood, provided the examiner has by experience of the latter test acquired sufficient knowledge to determine in an accurate manner the results obtained.

Maldevelopment of Esophagus.—In the case cited by Theron, the esophagus ended abruptly with a slight dilatation just above the level of the bifurcation of the trachea, having no connection with the latter at that point. At the same level, in the middle line posteriorly, a narrow tube, with a lumen of about 1 mm., opened from the trachea and gradually widened until it joined the cardiac end of the stomach. The stomach and duodenum were normal.

Suppurating Gonococcal Epididymitis.—Among 1,982 cases of gonorrhea, Ingram found only three cases of suppurating gonococcal epididymitis.

Carbon Monoxide Poisoning.—Two cases of carbon monoxide poisoning are recorded by Hunter in which the source of the gas was a small open grate fire.

Heart, London

12: 271-389 (March) 1926

*Case of Adams-Stokes Syndrome. S. A. Levine and M. Matton.—p. 271.
Reactive Hyperemia. H. Goldblatt.—p. 281.
Congenital Malformation of Heart with Partial Heart Block. J. G. Wilson and R. T. Grant.—p. 295.
*Veratrum Viride in Auricular Fibrillation. A. M. Wedd and A. N. Drury.—p. 307.
Unipolar Electrical Curves of Heart Muscle. A. N. Drury and G. R. Brow.—p. 321.
*Etiology of Aortic Regurgitation. I. M. Harmer.—p. 371.
Action of Nicotine on Heart Under Chloroform. A. G. Levy.—p. 387.

Adams-Stokes Disease with Syncopal Attacks.—A case of Adams-Stokes disease is reported by Levine and Matton in which attacks of syncope lasting from several seconds to about five minutes occurred. During the very long attacks epinephrine chloride was injected directly into the heart and was followed by prompt recovery. In one of these and for a period of five minutes, no heart beat could be seen, heard or felt. It is suggested that under such circumstances the customary beneficial effects from epinephrine, if given subcutaneously, would not be obtained, as the circulation is then at a standstill. In one of the major attacks, from which the patient recovered, ventricular fibrillation, lasting three and a half minutes and followed by complete inactivity of the ventricles for seventy-nine seconds, was displayed.

Veratrum Viride in Auricular Fibrillation.—Wedd and Drury summarize their clinical and experimental observations as follows: Alcoholic solutions of veratrum viride, when given to patients suffering from auricular fibrillation, produce slowing of both the auricular and ventricular rates of beating and a fall in blood pressure. These circulatory changes are independent of general toxic effects. Veratrum viride has, in addition to the vagal action already observed, a direct action, similar to quinidine, on the auricular muscle of the dog. This direct action will, on the circus movement theory of auricular fibrillation, tend to slow, and the vagal stimulation tend to enhance, the rate of the auricular oscillations. The relative preponderance of these two actions will determine the resultant auricular rate when the drug is administered to patients suffering from auricular fibrillation. The slowing of the ventricular rate by veratrum given orally occurs much earlier than that following digitalis bodies. However, as a therapeutic agent, veratrum is somewhat handicapped by uncertainty and irregularity of action. It may be useful in cases in which simultaneous slowing of ventricular rate and lowering of blood pressure is desired.

Etiology of Aortic Regurgitation.—An examination made by Harmer of 467 patients with aortic valvular disease disclosed these facts: Syphilis is an important factor in the production of aortic reurgitation; 37.3 per cent of all patients with aortic regurgitation between 20 and 70 show a positive Wassermann reaction. Rheumatism is of rather less importance and accounts for 27.2 per cent of the cases. Pure aortic regurgitation is mainly a disease of middle life, from 40 to 50, while combined aortic regurgitation and mitral stenosis is essentially a disease of young people, under 30 years of age. Fifty per cent of all cases of pure aortic regurgitation are syphilitic in origin, and 17.4 per cent rheumatic. Between

the ages of 20 and 35, 44 per cent of cases of pure aortic regurgitation are rheumatic in origin and 10.7 per cent are syphilitic. From 35 to 40, 14.3 per cent of cases are rheumatic and 40.5 per cent syphilitic, while over 40 years of age, only 5.2 per cent of cases are rheumatic and 71.3 per cent syphilitic. Syphilis is of most importance as an etiologic factor in patients over 35 years of age, because syphilitic aortitis, and hence aortic regurgitation, is not pronounced enough to cause cardiovascular symptoms until from twenty to twenty-five years have elapsed from the infection. Rheumatism is of most importance as an etiologic factor in patients under 35, because rheumatic fever is essentially a disease of young people and cardiovascular symptoms due to rheumatism appear on the average 11.6 years after the attack of rheumatic fever. Syphilis and rheumatism are both of lesser importance in the causation of aortic stenosis (with regurgitation), syphilis accounting for only 20 per cent and rheumatism for only 13.4 per cent of the cases.

Indian Medical Record, Calcutta

46: 65-96 (March) 1926

Longevity. J. N. Ganguly.—p. 65.
Nonspecific Protein Therapy. A. Roy.—p. 67.

Journal of Oriental Medicine, Dairen, Southern Manchuria

4: 25-70 (March) 1926

Intravenous Bromtherapy in Diseases of Skin and Genito-Urinary Organs. S. Hidaka.—p. 25.
Immunology of B. Malleus. K. Tsuru.—p. 55.
Origin of Charcot-Leyden Crystals. E. Homma.—p. 56.
Case of Aneurysm of Heart. H. Nishida.—p. 60.
Rise and Fall of Phosphorus Content in Blood. B. Sawada.—p. 62.
Fever and Bacillus Type of Dysentery and Ekiri in Children in Manchuria. N. Hoshi.—p. 64.
Eczema. S. Kobayaski and T. Yokoyama.—p. 66.

Kenya Medical Journal, Nairobi, East Africa

2: 329-354 (March) 1926

*Treatment of Ankylostomiasis by Glycerin. H. M. Shelley.—p. 330.
Sermon to Sanitarians. F. W. Jameson.—p. 334.
Native Diet: Lesson from Rhodesia. C. J. Wilson.—p. 337.
Two Albino Africans. J. A. Ross.—p. 343.
Rare Form of Plasmodium Vivax. T. S. Cochrane and G. V. Allen.—p. 344.

Treatment of Ankylostomiasis by Glycerin.—Twenty-two patients with ankylostomiasis have been treated with glycerin by Shelley on the theory that as the mature parasite usually occupies a portion of the duodenum or the proximal part of the jejunum, if the glycerin could be given in such an amount as to form a pool around the parasite, it would dehydrate it, and by so doing kill it. The method of administration is as follows: The patient remains one day in bed on a liquid diet. One ounce (30 Gm.) of magnesium sulphate solution is administered in the evening. Next morning, from 3 to 5 drachms (11 to 18 cc.) of glycerin is given. One ounce of magnesium sulphate solution is administered the same evening. The advantages of this method are said to be that it is entirely free from danger and it rapidly relieves the abdominal pain.

Lancet, London

1: 745-794 (April 10) 1926

Endocarditis. T. Horder.—p. 745.
Diabetic Coma Without Acetonuria. T. H. Oliver.—p. 750.
Miners' Nystagmus. G. H. Pooley.—p. 750.
*New Development in Radium Therapy. J. P. McHutchison and W. H. Brown.—p. 755.
Acute Dilatation of Stomach Complicating Artificial Pneumothorax. L. R. Shore.—p. 758.
Central Nervous Disturbance Manifested by Epileptic Fit. J. P. Martin.—p. 760.
Pneumococcal Meningitis. V. M. Synge.—p. 761.

Disintegration Products of Radium Used for Skin Diseases.—The application of the later disintegration products of radium to the treatment of certain skin conditions is discussed by McHutchison and Brown. The radio elements, radium D and radium E, have been extracted from used radium emanation tubes, and in equilibrium together have been prepared for medical use in the form of applicators of different kinds. Such applicators have been found to exert a beneficial action in the treatment of lupus erythematosus, and of various types of nevi. The radiation from radium D and radium E has the unique property, so far as radium treatment of skin conditions is concerned, that it is all absorbed by the part being treated, since its effective penetration is only about 3 mm. of tissue. Radium D and E applicators retain their strength and may be used for many years; sixteen years elapse before the activity declines to one half of its original value.

Medical Journal of South Africa, Johannesburg

21: 181-204 (Feb.) 1926

Bile Drainage in Anemia of Pernicious Type: Two Cases. R. L. Girdwood.—p. 182.
Three Cases of Hydatidiform Mole. E. C. Crichton.—p. 183.
Blood Sugar and Diabetes: Literature. A. D. Stammers.—p. 184.
Gallstones: Pathologic Aspect. A. S. Strachan.—p. 189.
Id. Biochemical Aspect. F. W. Fox.—p. 191.

Okayama Medical Journal, Okayama, Japan

434: 247-380 (March) 1926

Epinephrinemia Resulting from Central Glycosuria. Y. Hamazaki.—p. 247.
Amylase in Uterine Mucosa. O. Saito.—p. 280.
Behavior of Leukocytes to Artificial Irritants. I. Worms. Y. Matsunami.—p. 336.
Influence of Calcium on Narcotic Action of Morphine and Chloral Hydrate. I. Tominaga.—p. 349.

Practitioner, London

116: 281-336 (April) 1926

Late and Early Carcinoma of Breast. G. L. Cheatle.—p. 281.
Early Treatment of Mental Disease. W. Brown.—p. 289.
View of an Artist on Profession of Medicine. H. Tonks.—p. 298.
Cardiospasm or Achalasia of Esophagus. F. H. Diggle.—p. 304.
Extended Use of Whole Thickness Skin Graft. P. P. Cole.—p. 311.
Analgesic Effects of Roentgen Rays in Cancer and Other Painful Disorders. F. Hernaman-Johnson.—p. 314.
Treatment of Splenomedullary Leukemia by Deep Roentgen-Ray Therapy (Erlangen Method). J. Gracie.—p. 320.
Local Anesthesia in General Practice. W. Q. Wood.—p. 324

Sei-I-Kwai Medical Journal, Tokyo

45: 1-22 (Feb.) 1926

*Blood Picture in Pulmonary Tuberculosis. K. Tanaka.—p. 1.
Glycogen in Central Nervous System of Bird. C. Koyanagi.—p. 17.
Biochemical Studies on Cholin (Trimethyloxethylammoniumhydroxide). Y. Nishida.—p. 20.

Blood in Pulmonary Tuberculosis.—The blood in 100 cases of far advanced pulmonary tuberculosis in adults was examined by Tanaka. The leukocytes were always increased in number, on an average of about one fifth of the normal value, while the erythrocytes were always diminished about one fifth. The hemoglobin percentage was diminished about one fourth of the normal. In women, the count was lower than in males. There was no great difference of the color index in normal adults, or in incipient, moderately advanced and far advanced cases of pulmonary tuberculosis. The differential leukocyte count was approximately normal, except that the large mononuclears always showed an increase of about 35 per cent. Mast cells were also increased about two or three times above normal. "Shift to the left" of the Arneth count was observed not only in far advanced cases, but also in moderately advanced and occasionally in the incipient cases. The degree of dislocation to the left corresponded with the degree of advancement of the tuberculous process. On the other hand, if this count tends to assume a more right handed dislocation with a decrease of large mononuclears and mast cells, the prognosis becomes more favorable and indicates the improved result of the treatment.

South African Medical Record, Cape Town

24: 97-120 (March 13) 1926

Ocular Symptoms in Diseases of Endocrine Glands. J. Wilson.—p. 98.
Treatment of Puerperal Fever. D. Traill.—p. 106.
Conservative Treatment in Gynecology. D. H. Wessels.—p. 108.

Tohoku Journal of Experimental Medicine, Sendai, Japan

7: 1-110 (Feb.) 1926

Effect of Stimulation of Sensory Nerves on Rate of Liberation of Epinephrine from Suprarenals. T. Sugawara et al.—p. 1.
Meningococcus: Agglutination of Cooked Organisms. S. Kondo.—p. 80.
Testing Liver Function: Chromodiagnosis. T. Oka.—p. 94.
Gas Metabolism and Minute Volume in Icterus. T. Odaira.—p. 106.

Annales de l'Institut Pasteur, Paris

40: 89-168 (Feb.) 1926

Protection of the New-Born Against Tuberculosis. Calmette et al.—p. 89.
*Dysentery Anatoxin. J. Dumas et al.—p. 134.
Preventive Treatment of Rabies in Animals. E. Plantureux.—p. 141.
Cholesteremia and Glycemia in Malaria. Borel et al.—p. 152.
Microbic Galvanotropism in Animal Organism. G. Sanarelli.—p. 161.
Improved Technic for Vaccination Against Rabies. Remlinger.—p. 167.

Dysentery Anatoxin.—Dumas, Ramon and Bilal injected seven volunteers subcutaneously with 0.5 cc. of dysentery anatoxin. A slight inflammation with edema appeared at the point of injection, from two to four days later. It persisted for two or three days, and was not accompanied by any general reaction. A second injection (1 cc. of anatoxin) was given after eight days. Then 0.2 cc. of serum from the blood, withdrawn three weeks later, neutralized from one to four lethal doses of dysentery toxin in rabbits. Heating seemed to reduce notably the antigen property of the vaccine. The blood serum from the vaccinated did not agglutinate the Shiga bacillus or other dysentery bacilli. Thirty-one marines on a vessel on which there had been a small epidemic of dysentery on the last cruise were inoculated with the anatoxin before sailing. The ship physician reported that he did not note any morbid phenomena, except slight local reactions. Further observations will establish whether injections of the dysentery anatoxin are able to confer immunity during an epidemic, also the duration of this immunity.

Annales de Médecine, Paris

19: 5-80 (Jan.) 1926

*Abscess of the Spleen in Typhoid. C. Morel et al.—p. 5.
*Sclerodactylia with Scleroderma. L. Poussepp and I. Rives.—p. 19.
Mechanism of Elective Pneumothorax. E. Vaucher and H. Fath.—p. 28.
Clinical and Anatomic Findings in Arteritis Nodosa. Frommel.—p. 42.
Tuberculosis of Lung Lobules. D. Jaquerod.—p. 58.
Tuberculous Tracheobronchial Glands in Children. Mikulowski.—p. 67.

Abscess of the Spleen of Typhoid Origin.—In Morel, Dambrin and Tapie's case, a woman, aged *27*, developed an abscess of the spleen, at the end of typhoid fever. The diagnosis wavered between suppuration of the spleen and pleurisy, until the roentgen rays revealed an abscess below the diaphragm. The left half of the diaphragm was pushed up and was immovable. There was no effusion in the pleura. The spleen was incised, and the patient recovered completely. Typhoid bacilli were found in the pus cultures. Forty-three of fifty-seven cases, cited by Grand-Mourset, ended by death; no surgical intervention had been attempted. Of thirteen cases treated by operation, a fatal issue occurred only in one. The spleen had been removed in this case. Incision of the spleen by way of the pleura and diaphragm seems to be the operation of choice for abscess of the spleen.

Scleroderma on the Fingers.—The history of Poussepp and Rives' patient was as follows: A girl with glandular tuberculosis and manifestations of sympathetic hypertonus, such as exophthalmos, inversion of the oculocardiac reflex and dilatation of the pupils, developed, at the age of 8, atrophy of the phalanges with joint lesions. The process spread to the skin, accompanied by depigmentation, dilatation of the veins and local warmth. Histologic examination showed the characteristic lesions of scleroderma. The latter occupied the domain of the cephalic vein, like a band passing from the dorsal part of the wrist to the forearm, and ending on the upper arm. Abnormal conditions in the sympathetic nervous system may have been responsible for the scleroderma. It seems theoretically plausible that these changes may have been induced by the tuberculous virus, to which the sympathetic system is peculiarly sensitive.

Annales des Maladies Vénériennes, Paris

21: 161-239 (March) 1926

Gland Syndrome on Resumption of Antisyphilitic Treatment. Stancanelli.—p. 161.
Refractory Syphilis. M. Kitchevatz.—p. 184.
*Pandy Test in Syphilis. A. Starobinsky and H. Kaufmann.—p. 192.

Pandy Reaction in Syphilis.—The Pandy test for globulin in the cerebrospinal fluid appears valuable at the onset of neurosyphilis, when the Wassermann reaction may be still negative. Starobinsky and Kaufmann recommend this test as simple, rapid and sensitive. One drop of cerebrospinal fluid is added to 1 cc. of a 7 per cent phenol solution. The reaction is positive if there is a cloudy precipitate. Of *273* tests, the Pandy test harmonized with the Wassermann in *233*; in thirty-two it seemed to be more sensitive; in eight it was negative while the Wassermann test was positive. The response to the Pandy test was most intense and constant in general paresis; it was always negative in chronic nervous affections of nonsyphilitic origin. It can be applied by any physician; even at the bedside.

Archives des Maladies du Cœur, etc., Paris

19: 65-152 (Feb.) 1926

Chronologic Relations Between Auricular and Ventricular Contractions. E. Géraudel.—p. 65.
Duroziez' Intermittent Murmur. I. Mahaim.—p. 86.

19: 153-216 (March) 1926

Terminal Ventricular Tachycardia. L. Gallavardin.—p. 153.
*Artificial Pneumopericardium. J. Yacoel and R. Giroux.—p. 158.
Extrasystoles with Tachycardia. Gallavardin and Veil.—p. 164.
*Aleukemic Myelosis. S. Goia.—p. 167.

Artificial Pneumopericardium for Pericarditis with Effusion.—Yacoel and Giroux report a case of tuberculous pericarditis with effusion in a man, aged 45. Puncture releasing 350 cc. of fluid did not prevent the reappearance of the effusion in a few days. Then 600 cc. of fluid was removed, the tapping this time followed by injection of 300 cc. of nitrogen. The relief was immediate. The puncture with injection of nitrogen was repeated a month later. The patient soon improved so far as to be able to take a walk daily, without discomfort. The punctures were continued every two months, for a year, till the man died from tuberculous peritonitis. It is possible that the fatal outcome might be postponed much later, if the insufflation of the gas was made at the onset of the affection. The punctures were made in the left fifth intercostal space, 5 cm. from the sternum, using the lumbar puncture needle. The method did not cause pain or marked shock. The procedure might prove a powerful adjuvant in rheumatic or serofibrinous pericarditis; and improve recurring tuberculous pericarditis or pericarditis associated with nephritis. Artificial pneumopericardium should be preferred to pericardiotomy, which does not prevent the formation of pericardiac adhesions. The latter is indicated only in acute purulent pericarditis and tuberculous abscess of the pericardium.

Transformation of Aleukemic into Leukemic Myelosis.—Goia's patient presented marked enlargement of the liver and spleen, with blood of the aleukemic myelosis type. Grave anemia with the characteristic blood findings of leukemia developed by the end of the year. The leukocyte count increased to 60,000; there was also a large number of young marrow-cells. Aleukemic myelosis may be easily mistaken for Banti's disease. The error is fatal if splenectomy is performed. Goia suggests that injection of epinephrine might serve, as well as puncture of the spleen or trephining the tibia, to mobilize the myeloblasts, myelocytes and lymphoblasts in the blood, from stimulation of the hematopoietic apparatus. Differentiation from pernicious anemia can be based on the hyperchromemia with the latter. The clinical picture of an advanced internal cancer, with bone metastases, may be identical with that of aleukemic myelosis. Only careful roentgenography may avert the mistake. Aleukemic myelosis, not pseudoleukemia, is the proper term for the disease.

Bulletin de l'Académie de Médecine, Paris

95: 303-328 (March 23) 1926

Rôle of Filtrable Tuberculosis Virus in Maldevelopment of Infants. F. Arloing and A. Dufour.—p. 318.
Treatment of Cephalhematoma in the New-Born. Potocki.—p. 325

95: 329-368 (March 30) 1926

Light Therapy in Infants' Ward. J. Renault and H. Biancani.—p. 334.
*Prolonged Insulin Treatment of Diabetes. M. Labbé.—p. 336.
*Blood Cholesterol and Blood Pressure. G. Richard and J. Roesch.—p. 363.
Advantages of Chloramine for Sterilization of Drinking Water. E. Techoueyres and Pillement.—p. 366.

Results of Prolonged Insulin Treatment in Diabetes.—Of Labbé's twenty-four diabetic patients treated with insulin for two or three years, 50 per cent have died. Five died in coma,

but they had neglected the dietetic restrictions, or the treatment had been inadequate or begun too late. This occurred mostly in the summer when the patients were not under close surveillance. Three patients died from an intercurrent infection with suppuration; four from tuberculosis of the lung. Labbé emphasizes that while tuberculosis complicates diabetes more frequently in France than in America, death from pneumonia in diabetes is, on the contrary, rarer in France. He concludes that prolonged insulin treatment is unable to check the progress of the morbid process; it only retards it. The action of insulin does not consist in regeneration of Langerhans' islands, but in stimulation of pancreas functioning. Recuperation of the functioning may in time, in certain cases, lead to retrogression of the diabetes, but no cure has been reported as yet.

Blood Cholesterol in Hypertension.—Richard and Roesch found no parallelism between the degree of arterial hypertension and the amount of blood cholesterol in eighty persons with high blood pressure. On the other hand, there was no connection between the content of urea and of cholesterol in the blood, although hypercholesteremia was frequently present in Bright's disease. A considerable azotemia may be accompanied by only slight hypercholesteremia. All their patients with chronic and severe headache presented a notable cholesteremia, with azotemia and blood pressure rather low.

95: 369-377 (April 6) 1926

Genatropine in Digestive Pathology. Surmont and Polonovski.—p. 370.
*Chordoma in an Infant. R. Argaud and A. Lestrade.—p. 375.

Chordoma in Sacrococcygeal Region.—Argaud and Lestrade say that their patient is the youngest in whom this kind of tumor has ever been observed. The girl, 14 months old, was examined for abdominal disturbances suggesting intestinal obstruction. The liver appeared enlarged, with metastatic nodules on the anterior surface. The discovery in the pelvis of a tumor, the size of an infant's head, in front of the sacrum, explained the liver metastases and phenomena of obstruction. A minute incision back of the anus allowed the escape of a bloody gelatinous fluid, containing elements confirming the diagnosis of a chordoma. No trauma had occurred in this case. Some bone lesion, possibly of osteomalacia nature, might have been the causal factor.

Comptes Rendus de la Société de Biologie, Paris

94: 301-360 (Feb. 12) 1926. Partial Index

*Glucose Regulation in Pregnancy. M. Labbé and M. Chevki.—p. 302.
*Intestinal Fauna in a Wild Duck. K. I. Skrjabin.—p. 307.
Vaccination Against Wound Anaerobes. Weinberg and Barotte.—p. 312.
Bronchial Spirochetosis and Gangrene. Bezançon and Etchegoin.—p. 319.
*Effect of Ultraviolet Rays on Carbohydrates. H. Bierry.—p. 330.
*Sulphur in the Blood and the Suprarenals. Loeper et al.—p. 332.
Venous Pressure in Children. L. Payan and E. Giraud.—p. 344.
Diathermy in Diabetes Mellitus. Czezowska and J. Smolinski.—p. 347.
Induced Sensibility to Tuberculin. F. de Groer et al.—p. 356.
*Anaphylactic Syndrome in Measles After a Burn. S. Progulski and F. Redlich.—p. 359.

Disturbed Glucose Regulation in Pregnancy.—Labbé and Chevki's research included fifty-three pregnant women. Glycosuria was found, fasting, in 5.8 per cent; the glycemia appeared normal in all. Glucose tolerance tests were followed by a rapid rise in the sugar content of the blood, the increase persisting longer than usual. Glycosuria was manifest in 27.7 per cent. The alimentary hyperglycemia in pregnancy may be due to disturbed glucose regulation, associated or not with exaggerated permeability of the kidneys for glucose. This seemed to be connected with insufficiency of the liver. The disturbance of glucose regulation was transient; but it reappeared in successive pregnancies, gradually becoming more pronounced. Thus it is possible that pregnancies may sometimes be responsible for the origin of diabetes.

The Helminth Fauna in a Bird.—Skrjabin found in a wild duck 251 specimens of helminths, belonging to seventeen different species. He knows of no other instance in which so many helminth species were found in one host.

Action of Ultraviolet Rays on Carbohydrates.—In Bierry's experiments, the action of ultraviolet rays on carbohydrates was analogous to that of a soluble ferment. The production of gases resembled that induced by yeasts. Thus may be produced an actual ultraviolet fermentation.

Increase of Sulphur After Removal of Suprarenals.—Loeper, Decourt and Tonnet removed one suprarenal gland in dogs. This was followed by an increase of the sulphur in the blood, and by changed oxidation ratio. This fact explains the increase of sulphur in melanoderma. The suprarenals, normally, probably retain the sulphur.

Anaphylaxis Syndrome in Measles After a Burn.—Progulski and Redlich treated a 4 year old child for second degree burns on the face and body. A similar accident had occurred a year before. The general condition was good, and the healing of the burns was progressing rapidly, when suddenly fever with rhinitis and conjunctivitis appeared the eleventh day; Koplik's spots the next day, and a typical measles eruption a day later. At the same time urticaria developed, similar to that in serum sickness; it vanished in an hour, but reappeared the next day. The child had recovered by the seventeenth day. Evidently this was a case of an anaphylactic syndrome, accompanying measles in a subject sensitized by the waste products in the burned skin. The measles eruption was the unleashing factor. The fixation of the measles antigen in the skin may release products similar to those from burns. Or there may be a certain kinship between the measles antigen and the waste products of organ tissues.

Gynécologie et Obstétrique, Paris

13: 1-80 (Jan.) 1926

The Interstitial Fallopian Tube. C. Daniel.—p. 1. C'en, p. 81.
*Therapeutic Use of Ovarian Graft. V. Pettinari.—p. 19.
*Diagnosis of Triplet Pregnancy. S. Genell.—p. 41.
Hysterectomy After Expulsion of Mole. Lévy-Solal and Dupont.—p. 46.

Grafting of Ovary Tissue.—Pettinari applied ovary grafting in 332 animals, dogs, rabbits, rats, etc. The grafts survived only in animals of the same species and with a manifest deficiency of the sex hormone. The results were negative in cases of old ovariectomy, or after removal of the uterus. An early grafting seemed to prevent the by-effects of ovariectomy. It also stimulated the mental activity and functioning of different organs in old animals. The experimental findings afford a sound basis for ovary grafting in women. The clinical indications for it are: defective or arrested development of the sex organs; removal of ovaries and pathologic menopause; sterility of ovarian origin; syndromes from endocrine glands, also certain mental affections. Further research may prove the efficiency of ovarian grafts in senility. The purpose of the grafting may be stimulation of the ovarian gland or substitution of its function. The grafts may be implanted in the genital organs or close to them, intraperitoneally or extraperitoneally. Good results were obtained with implants in Douglas' pouch or in front of the bladder. It is possible that the retrorenal space may be advantageously used for implantation of the ovary.

Triplet Pregnancy Diagnosed by Roentgen Ray.—Genell reports a case in which palpation, abdominal and rectal, as well as auscultation of the fetal heart sounds suggested the diagnosis of a twin pregnancy. Roentgenograms revealed the presence of three fetuses. The two infants first born presented a common placenta and chorion; while the third had its own placenta and membranes. The woman died ten hours later from eclampsia without convulsions, and secondary anemia.

13: 81-160 (Feb.) 1926

Axial Torsion of Uterus with Fibroma. E. Hitzanidès.—p. 103.
*Blood Coagulation and Phlebitis. E. Chauvin et al.—p. 123.
*Remote Results of Low Cesarean Section. M. Wetterwald.—p. 131.

Blood Coagulation in Postoperative Phlebitis.—Chauvin, Esmenard and Jaur compared the blood coagulation time in twenty-five persons before and after operations. An insignificant increase was noted in most of the cases after the intervention. Gynecologic operations, although these are the ones most frequently followed by phlebitis, did not seem to influence the coagulability of the blood more than any minor surgical trauma. Neither was it more affected by general than by local anesthesia. The blood coagulation time in eight patients with phlebitis showed a constant but only slight acceleration. Thus postoperative thrombosis does not appear to be connected with blood coagulation; evidently other factors share in its mechanism.

Obstetric Future of Women After Low Transperitoneal Cesarean Section.—Wetterwald states that 45 per cent of 100 women became pregnant after a low transperitoneal cesarean section. In thirteen cases the operation was repeated; the old scar in the cervix was almost invisible. In forty deliveries, childbirth occurred by the natural route. There was rupture of the scar in one of a total of forty-five women. In 62 per cent of the cases delivery was spontaneous, while spontaneous delivery after symphyseotomy has been recorded in about 59 per cent, and after pubiotomy, in 22.7 per cent. After high cesarean section, rupture in successive deliveries occurred in 25 per cent; after cervical section, in 3 per cent. Low cesarean section is also recommended for placenta praevia; ten deliveries occurred by the vagina in eight women that had been previously treated in this way. The literature records ten ruptures in the cicatrix in 3,600 cesarean sections by this technic (0.28 per cent).

Journal de Chirurgie, Paris

27: 113-240 (Feb.) 1926

Roentgen-Ray Diagnosis of Bone Tumors. P. Moulonguet and R. Lifschitz.—p. 113.
*By-Effects of Ramisection. R. Leriche and R. Fontaine.—p. 143.

Phenomena Following Ramisection.—Leriche and Fontaine report that only slight and transient disturbances followed severing the last cervical and the first dorsal rami communicantes in their fourteen cases. Postoperative pains were noted in 14.3 per cent; in one case in the temporomaxillary joint and lower teeth; in another in the acromion. They were slight and disappeared in a few days. Pain in the frontal and occipital regions occurred in three instances, in the form of mild periodic headache. Other sensory disturbances were rare. Muscular atrophy developed in one woman in the shoulder and hand after ramisection for angina pectoris; it was associated with tactile hyperesthesia. There was in all cases a slight and transient hyperemia of the nasal, laryngeal and pharyngeal mucosa, entailing brief rhinitis, hoarseness and slight difficulty in swallowing. The operation was sometimes followed by vasodilatation of the salivary glands. After cervical sympathectomy, pains occurred in 23.5 per cent of their seventeen cases; they were intense and persisting. Frontal headache was noted in one, but in no instance were there sensory changes or muscle atrophy, although all presented slight laryngeal and pharyngeal disturbances. The postoperative changes appear as a direct result from severing certain nervous fibers, or as an indirect result from circulation changes after the operation. The pains and muscular atrophy are the direct consequences; headache, sensory, laryngeal and pharyngeal disturbances, the indirect.

Journal de Radiologie et d'Electrologie, Paris

10: 49-96 (Feb.) 1926

Radium Treatment of Cancer of the Tongue. C. Regaud.—p. 49.
Roentgenography of Bones in Congenital Syphilis. Péhu et al—p. 54.
Roentgenograms of Thoracic Aorta. Bonnamour et al.—p. 69.
Aneurysm of Descending Aorta. G. Meyer.—p. 78.

10: 97-144 (March) 1926

Lateral Radiography of the Hip Joint. Béclère and Porcher.—p. 97.
Geode Form of Generalized Osteitis. Yvernault and Montel.—p. 106.
*Papillomas of the Larynx. I. Solomon and A. Blondeau.—p. 112.
Radiologic Lesions of the Hip Joint. P. Moulonguet.—p. 115.
Roentgen Ray in Laryngeal Tuberculosis. Debicki.—p. 120.
Juvenile Osteochondritis in Foot. Schaller and Nadaud.—p. 123.
*Unification of Roentgen-Ray Dosage. A. Béclère.—p. 125.

Roentgen Ray in Treatment of Papillomas of the Larynx.—Solomon and Blondeau treated successfully multiple papillomas in the larynx of a young man. The growths, which had existed for nine years, caused hoarseness, then aphonia and dyspnea. Local interventions, even tracheotomy, were of little help. The roentgen-ray treatment had been started with a dose of 1,000 R. units, applied twice a week, to the right and left fields in the neck. After the third exposure, the tracheal cannula could be removed. After the seventh and last exposure the voice became normal. Reexamination of the patient, about eight months later, showed disappearance of the papillomas, which before the treatment had covered the whole of the vocal cords. The tracheal fistula healed; the young man was able to talk and even sing. A durable recovery was also obtained in two similar cases with 8,000 R. units applied in the course of twelve weeks.

Unification of Roentgen-Ray Units.—International standardization of the roentgen-ray unit is necessary for the future progress of roentgenography. This is emphasized by Béclère, who suggests the appointment of an international committee of roentgenotherapeutists and physicians for this purpose. A uniform roentgen-ray unit will make it possible, he says, to reproduce exactly in France a roentgen-ray treatment suggested, for instance, in America or England.

Presse Médicale, Paris

34: 385-400 (March 27) 1926

Latent Pulmonary Syphilis. M. Letulle and J. Dalsace.—p. 385.
*Intraspinal Anesthesia and Uremia. Abadie et al.—p. 387.
*Large Tumors in the Thigh. C. Perret.—p. 389.
Mental Anorexia of Adolescents and Adults. M. Nathan.—p. 390.
Medical Aviation in Peace Times. Julliot.—p. 395.

Anesthesia and the Blood Urea.—Abadie, Baldous and Dornier examined the blood of twenty-six persons operated on under intraspinal anesthesia. The urea content of the blood appeared always increased for about a week. It may be due partly to the surgical trauma, since different toxalbumins and nucleins are released from the injured tissues. This explains why azotemia is often more pronounced after major than after minor operations. Affections of the liver and kidneys, as well as old age may also be responsible for the high blood urea after an operation. On the other hand, the degree of the azotemia depends to a certain extent on the anesthetic used. It was considerably higher, for instance, with stovaine than with procaine. It is probable that the drugs act first on the sympathetic system, while the kidneys are involved secondarily. This does not interfere with the advantages of the intraspinal method, if the choice of anesthetics is made carefully.

Improved Technic for Operation on Large Tumor of the Thigh.—Perret describes the method he applied for disarticulation at the hip joint in two cases of enormous sarcoma of the thigh. The purpose is to avert embolism of neoplasm cells and to reduce the loss of blood during the intervention. The patient is kept in the Trendelenburg position during the whole operation. Through a small median subumbilical incision two ligatures, 1.5 cm. apart, are applied distad on the common iliac artery; then the incision is sutured. Then an incision is made in Scarpa's triangle, and the femoral artery and vein are severed, between two ligatures. This second incision is used for disarticulation of the hip joint. Owing to the slanting position, the blood contained in the tumor and limb flows back into the body. The effect is similar to that from autotransfusion. The general condition improved even before the exarticulation was completed. The color of the face looked more natural while the pulse became stronger and respiration deeper. The procedure may be indicated in case of grave traumatic wounds.

Revue Française d'Endocrinologie, Paris

4: 1-83 (Feb.) 1926

Exophthalmic Goiter and Addisonism. G. Etienne and G. Richard.—p. 1
*Diabetes Insipidus from Tuber Cinereum. J. Sabrazès.—p. 12.
Hypertrophy of the Breast. E. Frommel.—p. 24.
*Pathogenesis of Psoriasis. R. Carillon.—p. 32.

Diabetes Insipidus and Tuber Cinereum.—Sabrazès reports a case of diabetes insipidus in a boy, aged 15. A brief cerebrospinal meningitis, accompanying measles, at the age of 7, probably injured the tuber cinereum, and intercurrent influenza, of a nervous form, at the age of 14, seems to have awakened the latent process in the tuber cinereum, inducing phenomena of diabetes insipidus. Subcutaneous injections of pituitary extract (posterior lobe) reduced the amount of urine from 6 or 7 liters to 1.5 liter, and greatly improved the general condition. The effect of an injection persisted only for twenty-four hours; hence the injection (1 cc.) had to be repeated daily. Intensive treatment for syphilis should always be tried, since syphilis appears to be a frequent factor in the pathogenesis of diabetes insipidus. Roentgen-ray treatment may also be tried, as suggested by Towne's favorable experience.

The Sympathetic-Endocrine Basis of Psoriasis.—Carillon ascribes psoriasis to changes in the sympathetic tonus. This deranges the metabolism of the epidermis cells, and the horny layer of the skin does not develop normally. In these conditions, the slightest irritation, of traumatic or infectious origin, is able to cause desquamation; namely, the appearance of psoriasis. Epinephrine, pilocarpine, eserine and atropine, among others, may favorably modify the sympathetic tonus. If there are signs pointing to a certain endocrine gland, then a corresponding extract can be used. Otherwise, thymus extract or insulin are indicated.

Revue Médicale de la Suisse Romande, Geneva

46: 65-128 (Feb. 25) 1926

Radium Plus Surgery for Cancer of the Cervix. L. Aubert.—p. 65.
*Traumatic Hydronephrosis. C. Cornioley.—p. 82.
Pigmentation of the Skin. F. M. Messerli.—p. 101.
Roentgenography of Pericarditis. Frommel and Eghiayan.—p. 105.
Suffocating Capillary Bronchitis. M. Roch and E. Frommel.—p. 111.

Traumatic Uronephrosis.—Cornioley thinks that uronephrosis is the proper name for what is generally called hydronephrosis. He describes the case of a man in whom the sequence of hematonephrosis, sclerosis of the kidney from distention and a recent cicatrix in the kidney pelvis was revealed at the operation. A fall on the abdomen caused rupture of the pelvis along its lower border. Owing to clotting in the hematoma, the urine did not pass through the gap, thus favoring the healing. On the other hand, the clots that formed in the pelvis induced gradual obliteration of the ureter, with associated phenomena of periureteritis. It was followed by dilatation of the pelvis, and atrophy of the renal parenchyma from compression. Nephrectomy appeared as the only rational treatment since there was already compensatory hyperfunctioning of the other kidney.

Schweizerische medizinische Wochenschrift, Basel

56: 265-288 (March 27) 1926

Goiter and Iodine. Meisel.—p. 265.
"Cataract Operation." P. Knapp.—p. 266.
*Neuroses of Aviators. H. Meier-Müller.—p. 268.
*Bacteriophage Antiserums. E. Urech and H. Pache.—p. 275.
Dangers from Radioactive Substances. J. P. zum Busch.—p. 278.
*Early History of Syphilis. O. Eckstein.—p. 279.

Neuroses of Aviators.—Meier-Müller, who is chief surgeon of the Swiss Aviator Corps, and has himself experienced a few crashes, deals with the sequels of such injuries. The comparatively long period of several minutes which elapses between the realization of the imminent disaster and the final crash is horrible, and an intense reaction—beginning usually after a day or two of euphoria—is only natural. The best treatment and prevention of a neurosis consists in returning the patient to his occupation as speedily as possible. He succeeded in this way even with men whose skulls had been fractured more than once. The Swiss aviators are much better off, financially and otherwise, in service, than with a disability pension. Consequently, there are no neuroses among them. He is opposed to any compensation in the traumatic "wish" neuroses.

Bacteriophage Antiserums.—Urech and Pache produced agglutinins and amboceptors for Flexner and Shiga bacilli by intravenous injections of the homologous cultures dissolved by bacteriophages. In addition to this, these serums inhibited the action of the homologous, but not of the heterologous, bacteriophage. Prolonged contact of the serum with the bacteriophage improved the results.

Early History of Syphilis.—Eckstein reviews the early history of syphilis in China. He quotes a few passages published in 1632 by Chan-sze-ching. They are quite modern in the keen clinical observation and knowledge of extragenital and congenital syphilis. Mercury was used in treatment.

Archivio Italiano di Chirurgia, Bologna

14: 593-856 (Dec.) 1925

*Renal Tuberculosis. G. Bloch.—p. 593.
Endocanalicular Papillomas of Breast. A. M. Dogliotti.—p. 621.
*Rational Treatment of Peptic Ulcer. M. Bufalini.—p. 641.
Reenforcement of Wall of Inguinal Canal. Fusari.—p. 671.

Tuberculosis of the Kidney.—Bloch analyzes thirty-four operative cases of renal tuberculosis, including twenty women, and four bilateral cases in both men and women. The right kidney was affected in thirteen of the women. A cold abscess developed in the bed of the kidney after nephrectomy in all but ten of the total cases, even when the tuberculous lesion had been minimal. The ultimate outcome seemed to depend on the gravity of the tuberculous process in the bladder. Reflux from the bladder into the kidney left may infect the latter. Nephrectomy was done in three of the bilateral cases, with marked improvement in one patient, and another seems to be improving rapidly since the recent operation. The one patient with bilateral disease treated by nephrotomy, died three months later. It seems to be established now that nephrectomy is a comparatively mild intervention, while the results are most promising. Even with bilateral tuberculosis, removal of the least diseased kidney may give good results. It should be supplemented with local treatment of the bladder lesions.

Treatment of Gastric and Duodenal Ulcers.—Bufalini's experience and survey of the literature have demonstrated, he says, that truly radical treatment is impossible. We must be content with palliative measures, and they must damage as little as possible the anatomic and functional conditions of the organ. It is absurd and futile to suppress an organ almost completely in the attempt to cure disease in it. This is the paradoxic behavior of those who practice extensive resection.

Archivio Italiano di Urologia, Bologna

2: 293-416 (March) 1926

*Prostatectomy. G. Cattaneo.—p. 293.
Dysuria with Diverticulum in Bladder. L. Ferria.—p. 347.
Horseshoe Kidney. L. Pisani.—p. 356.
*Treatment of Movable Kidney. G. Pieri.—p. 398.
Total Infarction of Kidney. L. Pisani.—p. 403.

Suprapubic Prostatectomy.—In Cattaneo's service, the mortality of over a thousand Freyer operations has dropped from 14.38 per cent in 1909 to 1 per cent in the last hundred cases. He tabulates the details in this last group to show the outcome according to the indications and technic, warning that prostatectomy must not be done as an emergency operation. He prefers the two-stage technic. Calcium chloride arrested postoperative hemorrhage in 50 per cent of his cases, rendering tamponing unnecessary. Local anesthesia for the epicystotomy and epidural for the prostatectomy—refraining entirely from general anesthesia—have contributed to the favorable outcome.

Movable Kidney.—Pieri makes a lengthwise incision in the capsule at each side of the posterior surface of the kidney, and detaches the capsule between the incisions to form a bridge. This bridge is lifted up like a handle, and with it the kidney is suspended from the twelfth rib, slipping the handle over the rib. The technic is illustrated as applied in seven cases.

Minerva Medica, Turin

5: 1-116 (Dec. 30) 1925

*Serodiagnosis of Cancer. F. Micheli.—p. 2.
*Early Histologic Diagnosis of Cancer. B. Morpurgo.—p. 12.
Early Diagnosis of Cancer of the Breast. A. Carle and G. M. Fasiani. —p. 16.
*Idem: Mouth and Salivary Glands. L. Bobbio.—p. 19.
Idem. Throat and Esophagus. G. Gavello.—p. 22.
*Idem: Stomach. A. Ceconi.—p. 29.
Idem: Duodenum and Pancreas. P. Sisto.—p. 37.
Early Diagnosis of Intestinal Cancer. L. Fornaca.—p. 39.
Idem. G. Fantino.—p. 44.
Early Roentgenologic Diagnosis of Cancer of Digestive Organs. M. Bertolotti.—p. 46.
Diagnosis of Cancer of Biliary Apparatus. C. Gamna.—p. 53.
Idem: From Surgical Standpoint. O. Uffreduzzi.—p. 57.
Early Diagnosis of Cancer of Urinary Apparatus. Ferria.—p. 59.
Idem: Female Genital Organs. O. Uffreduzzi.—p. 64.
Idem: Male. G. Serafini.—p. 71.
Idem: Respiratory Apparatus. L. Ferrio.—p. 76.
Idem: Central Nervous System. G. Mattirolo.—p. 80.
Idem: Eye. F. S. Cirincione.—p. 86.
Idem: Skin. J. Cappelli.—p. 91.
Idem: Thyroid and Parathyroids. L. Stropeni.—p. 103.
Idem: Lymph Glands. C. Gamna.—p. 107.
*Heredity and Cancer. P. Mino.—p. 112.

Early Diagnosis of Cancer.—The twenty-two articles by leading clinicians in this issue of *Minerva* are addressed to

the general practitioner. They describe the earliest warning signals for the different locations of malignant disease, and reiterate the importance of suspecting cancer and establishing the diagnosis at once, even with the most apparently harmless little lump or bleeding. Histologic examination of the uterus scrapings enabled Morpurgo to detect microscopic cancer in four recent cases. Micheli commends the meiostagmin test as approaching reliability closer than any other serologic test. Bobbio emphasizes the exceptionally and rapidly malignant character of cancers in and around the mouth; even the most harmless lesions had better be eradicated. Ceconi warns that incipient gastric cancer may induce merely subjective symptoms or none. Loss of appetite and even repugnance for certain foods are usually the first symptoms, but sometimes the appetite is long retained. Vomiting may be the first sign of trouble, and the vomiting does not relieve the patient. The sudden appearance of these symptoms in the midst of apparent health is significant, especially at the cancer age. The heredity should also be considered. In regard to heredity, inquiry as to uncles, aunts, cousins and consanguineous marriages may prove instructive. The physicians throughout the country are urged to collect data bearing on the question of heredity of cancer. A copy of this issue has been sent to every physician in Italy by the newly organized Cancer Research Institute at Turin, in charge of Prof. B. Pescarolo, Senator. The articles are based on personal observations compared with case histories, and they form an exceptional manual for detection of malignancies in their incipiency. The address is Minerva Medica, Casella Postale 399, Turin, Italy.

Policlinico, Rome

33: 397-431 (March 22) 1926

*Mercury and Bismuth. L. Philippson.—p. 397.
Waxed Paper in Surgery. D. Taddei.—p. 401.
Erythroleukemic Syndromes in Infants. G. Barbera.—p. 402.
History of Medicine. C. F. Zanelli.—p. 409.

Mercury and Bismuth.—Philippson sees only quantitative differences between the action of bismuth and of mercury in syphilis. The former is less toxic. Consequently, larger doses (0.2 Gm.) may be injected. The numerous preparations of bismuth—especially those which contain less of the metal—are superfluous.

33: 433-467 (March 29) 1926

*Blood Group Tests. P. Badino.—p. 433.
Broca's Aphasia. G. Scollo.—p. 437.
Reticulo-Endothelial System. G. Notarangeli.—p. 441.
Sarcoma of the Mediastinum. S. Pera.—p. 444.

Blood Group Tests.—Badino found panagglutinins in the plasma (obtained by addition of anticoagulants) and to a less degree in the serum which separated at the temperature of 16 or 37 C. The latter specimens agglutinated every blood, including the own, sometimes even at 16 C. He concludes that careful work—especially when the test cannot be made under exact thermal conditions—requires the use of test serums which separated from blood kept in the icebox for two hours. The panagglutinins are absorbed by the coagulum in this case.

Riforma Medica, Naples

42: 241-264 (March 15) 1926

Decompensation in Heart Disease. A. Ferrannini.—p. 241.
Rat-Bite Disease. G. Franchini.—p. 243.
Mätéfy Test in Tuberculosis. C. Olivero.—p. 244.
The Stigmata of St. Francis of Assisi. A. Del Gaudio.—p. 253.
Italian Dermatologic Congress. A. Buquicchio.—p. 254.
Contagiousness of Laryngeal Tuberculosis. A. Della Cioppa.—p. 258.

42: 265-288 (March 22) 1926

Metastatic Abscess in the Prostate. D. Taddei.—p. 265.
Solitary Cysts in Kidneys. E. Santoro.—p. 267.
*Pharmacology of Garlic. G. Sunzeri.—p. 270.
Congenital Malaria. F. P. Annecchino.—p. 285.

Pharmacology of Garlic.—Sunzeri injected aqueous and alcoholic extracts from *Allium sativum* into dogs. A rapid drop in the blood pressure, due to stimulation of the vagus, followed. Later on, the blood pressure was lowered by an action on the blood vessels.

Memorias do Instituto Oswaldo Cruz, Rio de Janeiro

18: 1-302, 1925. Portuguese and English Edition

Bacillary Dysentery at Bahia. G. Pacheco.—pp. 5 and 43.
*Action of Metallic Colloids on Immunization. G. Pacheco.—pp. 81 and 119.
Snakes in Brazil. O. Magalhães.—pp. 151 and 157.
*The Life Cycle of Bacteria. A. Fontes.—pp. 163 and 197.
Protozoa Observed in Brazil. C. Pinto.—p. 211.

Colloidal Metals in Relation to Immunization.—In Genesio Pacheco's extensive research on domestic and laboratory animals and in twelve clinical cases, the colloidal metals all acted in the same manner; namely, increasing the amount of agglutinins and slightly raising the temperature, but not modifying otherwise in any way the course of the infection.

The Life Cycle of Bacteria.—Fontes is convinced that there is an ultramicroscopic phase in the life cycle of bacteria which our present methods of investigation are unable to reveal. It is evident, however, that bacteria are nucleated cells, but the nucleus is dispersed. It may mobilize and condense into granulations. The granules which stain deeply with basic stains are able individually to reproduce the species. He summarizes the life cycle as: first, granular dust, then free granulations; secondly, the phase of growth, granular multiplication and cell organization, with intracellular and extracellular emission of granules; then cell division and reproduction. The third phase is the disintegration of the cell, then granular dust and granular disintegrating lysis, with free granulations and their multiplication, with cellular organization. The discovery of the bacteriophage helps to explain the bacterial mutations from endogenous principles.

Revista de la Asoc. Médica Argentina, Buenos Aires

38: 445-535 (Dec.) 1925

Tumor in Cerebellar-Pontile Region. Alurralde and Sepich.—p. 445.
*Insulin in Diabetes Insipidus. C. P. Waldorp.—p. 458.
Syndrome of Insulin Hypoglycemia. Escudero and Iriart.—p. 470.
*Tonsil Complications. E. V. Segura and J. J. Viton.—p. 485.
*Visualization of the Gallbladder. E. Lanari.—p. 505.
The Ultraviolet Rays in Pediatrics. J. M. Macera.—p. 516.

Treatment of Diabetes Insipidus.—Waldorp reports that in two cases of diabetes insipidus no benefit was obtained from insulin treatment, supplemented or not with calcium, potassium or sodium ions. Pituitary extract promptly improved the condition. Addition of insulin did not seem to enhance its effect.

Complications of Tonsillitis.—Segura and Viton reiterate that even an apparently very mild infectious process in the tonsils may be responsible for grave disease in the kidneys or other organs. One previously healthy young woman, after a slight tonsillitis which subsided spontaneously, developed tube casts, severe hematuria and finally alarming uremia. Acute nephritis is the most common complication, appearing with the flaring up of chronic tonsillitis. There may be hemoglobinuria with the albuminuria, but there is always more or less hematuria. In one patient with albuminuria, which was declining, the albumin climbed to 8 Gm. per liter during an attack of tonsillitis. In some cases, hematuria is the only sign of kidney involvement with recurring tonsillitis. Castaigne's patient had hematuria fifteen times in five or six years, without any other symptoms from the kidneys. Segura and Viton have witnessed the subsidence and non-return of articular rheumatism and appendicitis after tonsillectomy.

Visualization of the Gallbladder.—Lanari gives twenty-eight roentgenograms from his hundred patients tested with sodium tetraiodophenolphthalein by the vein or mouth. The Saralegui injector proved exceptionally useful. The findings are negative or inconclusive if the cystic duct is obstructed or the liver cells not functioning properly. The findings were negative for some unexplained reason in two cases of gallstones, one of gastric ulcer and one of epigastric hernia. In two cases of chronic cholecystitis without gallstones, the kidneys were large, with outlet free, and yet the gallbladder was scarcely visible while the kidney on that side gave a positive response, the pelvis and calices looking as if an opaque substance had been injected.

Revista del Círculo Médico de Córdoba

13: 1-56, 1925

Two Cases of Inguinal Poradenitis. F. Strada and Antenor Tey.—p. 3.
*Laryngopathy. J. M. Aliaga and Ergasto Marenco.—p. 16.
Foreign Bodies in Crystalline Lens. A. Urrets Zavalia.—p. 25.

Throat Disease of Gastro-Intestinal Origin.—Aliaga and Marenco describe cases of disease of the larynx which it was impossible to classify under the usual headings, and which subsided under treatment of the digestive tract. Recurring hoarseness, with sometimes transient aphonia, especially as night approached, and vague sensations in the larynx, suggested some grave disease, even in the absence of signs of inflammation. After exclusion of all other causes, treatment of constipation, change of diet and general hygiene soon restored conditions in the throat to normal. One of the few cases described in detail was a girl of 16 whose constant hoarseness subsided under a change of diet. Another girl, in whom tuberculosis had been diagnosed, recovered under measures to promote digestion. These proved effectual also in two adults, aged 35. In one case of notable hoarseness, with much mucous secretion and early fatigue, they incriminated the patient's vegetarian diet, and improvement soon followed when meat was added to the diet.

Revista Médica de Barcelona

5: 1-50 (Jan.) 1926

*Original Devices by an Otorhinolaryngologist. R. Botey.—p. 4.
*Internal Diversion of the Bile. M. Corachán.—p. 18.
*Mega-Esophagus. J. Lentini Diaz.—p. 27.
Kala-Azar in Spain. G. Pittaluga.—p. 42.
Uricacidemia; Treatment with Alkaline Mineral Waters. Rouzaud.—p. 63.
Autohemotherapy in Ophthalmology. F. Palomar Collado.—p. 68.

Instruments for Ear, Nose and Throat Work.—Botey gives twenty-six illustrations of devices he has originated. Among them are his intratympanic mirror which he introduces when perforation in the drum-head permits; rubber sponge tampon; taste-tester; special coin extractor, and radium applicator for the esophagus. He reproduces some of the intratympanic views.

Internal Diversion of Bile.—Corachán gives an illustrated description of a technic which answered its purpose perfectly in a case of cancer of the pancreas with the lower common bile duct impassible. After removal of the gallbladder, he twisted the stump of the cystic duct around and implanted it in the duodenum.

Mega-Esophagus.—As Lentini Diaz has encountered twelve cases in three years and heard similar reports from others, he thinks that mega-esophagus must be comparatively common in Spain. Periods of extreme difficulty in swallowing alternate with periods of apparent health, but the latter grow progressively shorter and less frequent. Pain is an almost constant symptom; some complain of it more than of the dysphagia. Lavage relieves the pain but not the dysphagia. Progressive dilatation of the cardia by Guisez' multiple bougie method has given the best results in his experience, apparently curing some of his patients. There is generally a tendency to recurrence requiring repetition of the treatment.

Revista d. l. Soc. Arg. de Neurol. y Psiq., Buenos Aires

1: 167-248 (Dec.) 1925

*Mental State of Chauffeurs. A. Ameghino.—p. 167.
Acute Delirium with Purulent Stomatitis. H. Piñero.—p. 180.
Malaria Treatment of General Paresis. G. Bosch and A. Mó.—p. 185.
Intelligence and Other Tests in Psychiatry. Idem.—p. 224.
Constitutional Emotional Instability. F. Gorriti.—p. 234.

The Licensing of Motor Drivers.—Ameghino deplores that the Buenos Aires regulations for licensing of automobile drivers omit all reference to the mental condition; only the physical qualifications are considered. One truck driver was brought to the hospital on account of sudden cerebellar motor incoordination, and an epithelioma was found at necropsy in the left ventricle; it must have been long in developing. A taxi driver was brought in an epileptic somnambulistic state. He had been in the habit of holding his feet constantly in a certain position so that if a seizure developed he would unconsciously brake the cab. His brother happened to be in the vehicle and brought him to the hospital while still in the dazed condition. The number of automobile accidents has increased from 813 in 1915 to 2,580 in 1924. In the discussion that followed, Oliveira Esteves presented a motion urging the city authorities to provide for periodic examination of motor drivers. Psychiatric tests are not necessary, only a good clinical examination with study of the anamnesis.

Semana Médica, Buenos Aires

1: 165-220 (Jan. 28) 1926

*Treatment of Anthrax. F. Destéfano and R. F. Vaccarezza.—p. 165.
Constitutional Emotional Instability and the Sympathetic Nervous System. F. Gorriti.—p. 195.
Combined Pneumothorax and Tuberculin Treatment in Tuberculous Pleuritis with Effusion. J. J. Viton.—p. 198.
Brain Tumor with de Foville Syndrome. J. M. Obarrio.—p. 205.
Broken Bottle in Rectum; Laparotomy; Recovery. Curat and Lasala. p. 213.
*Air in the Bladder. C. Heuser.—p. 214.

Treatment of Anthrax in Man.—Destéfano and Vaccarezza analyze 414 cases of anthrax, tabulating the outcome. The mortality was 10.93 per cent in 192 cases in which a 5 per cent solution of peptone was injected intramuscularly once or twice a day until the general symptoms subsided. It was 15.85 per cent in the eighty-two treated exclusively with antianthrax serum, and 29.41 per cent in the seventeen treated exclusively with normal beef serum. Omitting the cases in which death occurred within two days, these figures become respectively, 9.04 per cent for the peptone; 10.38 for the antiserum, and 25 per cent for the normal beef serum. The peptone parenteral protein therapy seems to be not only more effectual, but it does not induce serum sickness.

Air in the Bladder.—Heuser's roentgenograms explain the mechanism of death after insufflation of air into the bladder. A small amount of air was injected to facilitate investigation of a bladder tumor but no air could be seen on roentgenoscopy. The procedure was repeated with iodized oil, and the oil cast a good shadow, but the air was seen to have made its way into the kidney. If the walls of the urinary passages had been fragile, the air might have passed into the blood stream, with fatal air embolism. This danger is greater than hitherto realized, as the roentgenograms showing the air in the kidney are mistaken for air in the intestines—as happened in this case at first. No more than 80 cc. of air should ever be injected into the bladder.

Archiv für Kinderheilkunde, Stuttgart

77: 241-320 (March 20) 1926

*Pneumothorax in Children. K. Benjamin.—p. 241.
*Pyuria of Infants. M. Frank.—p. 246.
Metabolism of Infants. E. Müller et al.—p. 297.
Stricture of Urethral Orifice. F. Gierthmühlen.—p. 303.
Sachs-Klopstock Test. A. Nohlen.—p. 305.
*Pneumonia in Infants. E. Burghard.—p. 306.

Pneumothorax in Children.—Benjamin points out the good prognosis of spontaneous pneumothorax in children. Grave symptoms arise only with a valve pneumothorax. Puncture of the chest wall usually relieves such patients.

Pyuria of Infants.—Frank regards pyuria due to staphylococci and streptococci as part of a general sepsis. Colon bacillus pyuria is due to an ascending infection, but its main localization is in the kidney pelvis. The bladder may or may not be affected. Mere infection of the bladder does not cause the clinical picture of pyuria in infants nor in experimental animals.

An Early Symptom of Pneumonia in Infants.—Burghard recommends to approach the ear closely to the mouth of the infant. Fine crepitant râles may sometimes be heard before any other signs of pneumonia are evident. He advises a more frequent use of this little known method.

Klinische Wochenschrift, Berlin

5: 537-584 (March 26) 1926

*Formation of Bilirubin. E. Melchior et al.—p. 537.
*Electrocardiography. F. Schellong.—p. 541.
Secondary Radiation with Metals. A. Lieciti.—p. 545.
*Flora of the Duodenum. W. Löwenberg.—p. 548.

Clinical Research on Variation. H. Rautmann.—p. 551. C'cn.
The Nails in Seborrheic Eczema. W. Richter.—p. 555.
Calcium in Cerebrospinal Fluid. F. Lickint.—p. 556.
"Glycogen and Insulin Treatment." B. Molnár.—p. 558.
Reply. D. Adlersberg and O. Porges.—p. 559.
*Inclusions in Erythrocytes. M. Mayer et al.—p. 559.
*Action of Rays on Cells. R. Gassul.—p. 560.
Diverticula of Duodenum. A. Wierig.—p. 561.
Benign Infectious Epitheliomas. H. Martenstein.—p. 563.
"Relation Pathology." G. Honigmann.—p. 565.
*Angina Pectoris and Body Structure. E. Mester.—p. 583.

Formation of Bilirubin.—Melchior, Rosenthal and Licht confirm the bilirubinemia which occurs after total extirpation of the liver in dogs. They ask, however, how large is the extrahepatic formation of bilirubin when compared with the hepatic as postulated by Minkowski and Naunyn after their experiments on birds. They found that extirpation of the liver in dogs prevents the development of toluylendiamine and phenylhydrazine icterus. They concluded that the liver is the most important organ of bilirubin formation in mammals as well as in birds. They doubt whether the reticuloendothelial cells have any particular significance for it.

Electrocardiography.—Schellong objects to needle electrodes on account of the deformation of the curve due to polarization. He prefers small copper plates applied externally.

Flora of the Duodenum.—Löwenberg believes that the gastric acid is not the only cause of the relative sterility of the normal duodenum. The bactericidal properties of the duodenal fluid are more important. He found almost regularly an absence of this power in pernicious anemia, and frequently in inflammations of the biliary passages.

Inclusions in Erythrocytes.—Mayer, Borchardt and Kikuth found in the erythrocytes of anemic splenectomized rats inclusions which stain red with the Giemsa solution. Although they do not exclude the possibility of their degenerative nature, they point to a similarity with the inclusions described in Oroya fever under the name of bartonella bacilliformis.

Action of Rays on Cells.—Gassul reports his observations with roentgen irradiation of tissue cultures. Daylight is one of the possible sources of error in such experiments. Explants of spleen tissue from normal frogs did not grow so well in the plasma from irradiated frogs as similar tissue taken from irradiated frogs and cultivated in normal plasma.

Angina Pectoris and Body Structure.—Mester has never seen a floating tenth rib in any patient with angina pectoris.

Medizinische Klinik, Berlin

22: 437-474 (March 19) 1926

Insulin Treatment of Diabetes. O. Minkowski.—p. 437.
Cerebral Phenomena After Vaccination. C. Leiner.—p. 441.
Syphilis of the Aorta and Endocarditis. F. Pineles.—p. 444.
*Unusual Metastasis of Erysipelas. G. Doberauer.—p. 445.
*Old Primiparas. K. Jaroschka.—p. 448.
Retention Tube in the Stomach. H. Galewski.—p. 451.
*Fatal Accident in Roentgen Laboratory. F. Polgár.—p. 453.
Shot Grains in Appendix. Sonnenfeld.—p. 454.
Degkwitz' Serum. R. Degkwitz.—p. 454. Reply. Kaupe.—p. 455.
*Hemagglutinins in Cancer. F. Schiff.—p. 455.
Roentgen Treatment of Tuberculosis. W. Landau.—p. 461. C'td.

Unusual Metastasis of Erysipelas.—Doberauer had erysipelas of the leg seven weeks after resection of varicose veins. Six days later, hemorrhage from the bowel and grave abdominal features developed. A cecal fistula was made and the patient was recovering. The fistula was closed a month later. This provoked a recurrence of the erysipelas as well as of the abdominal disturbances, lasting for several weeks. He lost 30 Kg. (40 per cent of his former weight). The abdomen was reopened but, instead of the expected abscess, only adhesions of the intestines and infiltration of the parietal peritoneum were found. Nevertheless, improvement set in immediately, and he recovered, four months after the first erysipelas.

Old Primiparas.—Jaroschka's statistics confirm Kermauner's opinion that the age of the primipara is practically irrelevant in the prognosis of labor. The percentage of complications increases with the age only because the number of infantile and hypoplastic women who conceive at last increases with the passing years.

Fatal Accident in Roentgen-Ray Laboratory.—Polgár reports another case of death of a physician who stepped on a foot contact while adjusting a wire. He believes that elimination of all the sources of danger is the most important present problem in roentgenology.

Hemagglutinins in Cancer.—Schiff comments on Weitzner's paper summarized in these columns February 6, 1926, p. 455. He attributes the latter's results to error from pseudoagglutination which is frequent in the blood from cancer patients. Cancer patients show about the same percentages of blood groups as healthy people of the same locality.

22: 475-514 (March 26) 1926

Foreign Bodies in the Esophagus. J. Zange.—p. 475.
*Insulin in Diabetes. O. Minkowski.—p. 479. C'cn.
*Roentgenology of Urethra. E. Langer and C. Wittkowsky.—p. 483.
*The Brain in Adiposogenital Dystrophy. E. J. Kraus.—p. 485.
*Surgery of the Appendix. Schönstadt.—p. 489.
*Treatment of Sinusitis. Sondermann.—p. 490.
Pneumothorax Apparatus. W. Neumann.—p. 491.
Oxychromatic Changes of Nuclei. A. Luger and E. Lauda.—p. 493. C'cn.
Calcium Administration. Opitz and Jung.—p. 497.
Results of Neurologist's Treatment. T. Cohn.—p. 498. C'cn.
Survey on Endocrinology. F. Boenheim.—p. 500.
Roentgen Treatment of Tuberculosis. W. Landau.—p. 501. C'cn.
Treatment of Gonorrhea and Syphilis. H. Stranz. Supplement.—pp. 23-46.

Insulin in Diabetes.—Minkowski regards insulin provisionally as a substance which restores the faculty, lost by deficiency of the pancreas, which had enabled the individual to utilize his metabolism in a normal way as a source of energy. Its action is more pronounced in the diabetic organism because of the loss of the faculty to regulate the own insulin production. Yet a "resistance" to insulin should not be construed as a proof of an extrapancreatic origin of the special glycosuria. The sugar threshold may be changed by various causes. A change of the susceptibility to insulin is rare. It is usually due either to an improvement or to the progress of the diabetes. Infections lower the action of insulin. Pus destroys it in vitro in a few minutes. Insulin should be used in diabetes with pulmonary tuberculosis except when it induces focal reactions. One of his patients in this category requires 300-400 units daily, and has taken about 25,000 units within three months. Her blood pressure increased at the same time. It is not impossible that her high resistance against insulin is due to compensatory hyperproduction of epinephrine. Tyramine, which paralyzes the hyperglycemia action of epinephrine, lowered her insulin requirement. Nothing similar to this could be found in other diabetes patients normally susceptible to insulin.

Roentgenology of the Urethra.—Langer and Wittkowsky describe with illustrations the technic for roentgen examination of the urethra. One of the methods used is the exposure during micturition.

The Brain in Adiposogenital Dystrophy.—Kraus found chronic encephalitis of the base of the interbrain (tuber, infundibulum, corpora mamillaria and substantia perforata) in a case of adiposogenital dystrophy. The pituitary was almost normal.

Surgery of the Appendix.—Schönstadt attributes to the administration of castor oil many complications in appendicitis. The pulse and the muscular stiffening are the most important points in estimation of the gravity of the case. Gonorrhea should be suspected in every female patient. In acute cases with gangrene, but without diffuse peritonitis, he advises to suture the peritoneum but not to tighten the sutures in the abdominal wall unless there are no signs of peritonitis after five days. He has had no death in recent years in peritonitis. He attributes this partly to luck, partly to avoiding injury to the intestines, and to good drainage through the Douglas pouch, or (in men) perineum. He describes the technic.

Treatment of Sinusitis.—Sondermann draws attention to his method of treatment of catarrhal sinusitis by lowering the intranasal pressure by aspiration.

Monatsschrift für Kinderheilkunde, Leipzig

31: 587-678 (March) 1926

Familial Melanosis of the Eyeball. E. M. Selter.—p. 587.
*Still's Disease. W. Reinold and T. Stoeber.—p. 597.
Pathology of Twins. I. E. Stransky.—p. 613.
*Treatment of Laryngeal Diphtheria. E. Burghard.—p. 626.

Still's Disease.—Reimold and Stoeber noted an improvement in a case of Still's disease under injections of a streptococcus viridans autovaccine.

Treatment of Laryngeal Diphtheria.—Burghard explains the details of the expectant method used by Schlossmann. If the stenosis progresses in the first twenty-four hours after injection of the antitoxin, they do not abstain from tracheotomy. It is necessary if the larynx or trachea is suddenly occluded. They always keep everything ready for a tracheotomy which may be performed in such a condition without anesthesia. Yet their main principle consists in quieting the children by giving them narcotics and yielding to every wish. An open window is always a help.

Münchener medizinische Wochenschrift, Munich

73: 475-514 (March 19) 1926

Treatment of Abortion. H. Sellheim.—p. 475.
*Exudative Pericarditis. P. M. Kamenetzky and Rabinowitsch.—p. 478.
*Serum Treatment of Pneumonia. W. Brand and R. Kochmann.—p. 479.
Interruption of Motor Nerve Conduction. Hass and Winkler.—p. 481.
Chronic Gastritis. R. Schindler.—p. 482.
Kauffmann's Experiment. K. Brucke.—p. 484.
"Artificial Abortion." A. Döderlein.—p. 485.
Venesection in Renal Insufficiency. E. Becher.—p. 488.
Chronic Diseases of Joints. W. Alwens.—p. 489. C'cn.
Hygiene in Jugoslavia. Abel.—p. 492.

Exudative Pericarditis.—Kamenetzky and Rabinowitsch regard exaggerated movability of the heart dulness in changes of the patient's position as a sign of pericardial effusion. It is pathognomonic if the shape of the dulness or of the roentgen shadow changes at the same time.

Serum Treatment of Pneumonia.—Brand and Kochmann injected a polyvalent pneumococcus antiserum in thirty-nine infants and small children with bronchopneumonia. Four of them (10 per cent) died. Of the forty-two controls, twenty-two (52 per cent) died.

73: 515-554 (March 26) 1926

*Vaccination and Paralysis. F. Plaut and F. Jahnel.—p. 515.
*A Dosimeter. H. Chaoul.—p. 518.
*Treatment of Typhoid. Hilgermann.—p. 520.
*Tannin Test for Cancer. R. Wigand.—p. 521.
Psychocatharsis and Psychanalysis. C. Römer.—p. 525.
Vaginal Acidity in Gonorrhea. F. Wirz and Legène.—p. 526.
Rupture of Spleen in Therapeutic Malaria. F. Bachmann.—p. 528.
Rupture of Uterus After Cesarean Section. H. Strache.—p. 530.
*The Reticulo-Endothelial System. E. Zebrowski et al.—p. 531.
Metreurysis by Expansible Bag. H. Baumm.—p. 531.
Treatment of Abortion. H. Sellheim.—p. 532. C'tn.
Nephritis. Schlayer.—p. 535.
Pharmaceutic Survey. Rapp.—p. 538.

Smallpox Vaccination and Paralysis.—Plaut and Jahnel found in extensive experimental research on rabbits no relations between cowpox virus and *Spirochaeta pallida* which might serve as a basis for any hypothesis of a causal connection between smallpox vaccination and general paresis.

A Dosimeter.—Chaoul has constructed an iontodosimeter which indicates directly the dose of rays which has been applied.

Treatment of Typhoid.—Hilgermann infected rabbits intraperitoneally with 5 cc. of a virulent typhoid culture. When he injected 2 cc. of a 4 per cent solution of sodium salicylate intravenously, from two to five hours later, the animals recovered, while the controls died the next day. One of the animals treated after five hours died suddenly in convulsions. This could be prevented by a preliminary injection of a typhoid antiserum.

Tannin Test for Cancer.—Wigand claims to demonstrate proteins in extreme dilutions (many millions) by addition of fresh tannin. He uses high titers of the patient's serum as the indicator of cancer. He claims that the only errors are from false negative reactions.

Phagocytosis and the Reticulo-Endothelial System.—Zebrowski and four other pupils of Wysokowicz recall attention to the latter's article published in 1886 in the *Zeitschrift für Hygiene*. He demonstrated that micro-organisms injected into the blood stream are taken up not only by motile leukocytes, but also by the endothelial cells of the capillaries, especially in the spleen, liver and bone marrow.

Wiener klinische Wochenschrift, Vienna

39: 349-376 (March 25) 1926

*Roentgen-Ray Treatment in Skin Diseases. L. Freund.—p. 349.
*Therapeutic Malaria. J. Donath and R. Heilig.—p. 353.
Iodine and Exophthalmic Goiter. J. Borak.—p. 355.
Bacterium Lactis Aerogenes. J. Burtscher and W. Meyer.—p. 356.
Racemose Angioma Near Corpus Callosum. E. Klimesch.—p. 358.
"Path of Air Through Nose." Kayser. Reply. Hofbauer.—p. 361.
History of Laryngology. H. Marschik.—p. 361. C'cn.
Physical Treatment of Gonad Endocrine Disturbances. Liebesny.—p. 363.
Leanness and Insulin Fattening. W. Falta. Supplement, pp. 1-15.

Roentgen-Ray Treatment in Skin Diseases.—Freund emphasizes that it is as necessary to protect the deep tissues as the surroundings. It is not only superfluous, but injurious, to use hard rays on superficial skin diseases, such as psoriasis, eczema, or for depilation. He uses filters (0.5 to 3 mm. aluminum) only for depilation and for processes localized under the skin. The rays should be about 7-8 We. hard. He uses 6-7 We., without any filter, in psoriasis. Combination with other procedures—for instance, excision in lupus with irradiation of the open surface—improved the results. He is gratified with the success of roentgen treatment in favus and similar formerly extremely chronic affections. He does not mind that the articles still being published on it never mention the originator of the idea.

Therapeutic Malaria.—Donath and Heilig found remarkable differences between the changes induced by malaria and by other fever-producing agents. The amino-acids increase in the blood after injection of vaccines and proteins, but not in malaria. Contrary to this, the amino-acid content of the cerebrospinal fluid increases notably in malaria, less in relapsing fever and after typhoid vaccine, and not at all after injection of milk. They believe that a focal reaction of the central nervous system accounts for the favorable influence of malaria on general paresis.

Zentralblatt für Chirurgie, Leipzig

53: 705-768 (March 20) 1926

*Traumatic Chondropathy of Patella. H. Fründ.—p. 707.
Technic for Removal of Liver in Dogs. E. Melchior.—p. 710.
*Surgery of Heart Valves. I. P. Dmitrieff.—p. 715.
Surgery of Bronchial Asthma. F. Erkes.—p. 718.
Impalement Injury. A. Rosenburg.—p. 719.
"Surgery of Cancer of Breast." E. Enderlen.—p. 720.
"Treatment of Burns." E. Enderlen.—p. 721.

Traumatic Chondropathy of Patella.—Fründ found traumatic necrosis of the cartilage of the patella a comparatively common cause of chronic disturbances. Tapping the patella with the knee extended is painless. Pain is elicited if the knee is bent and the tapping repeated. Excision of the diseased cartilage relieves the patient.

Surgery of Heart Valves.—Dmitrieff dilates the mitral valve in animals by invaginating the auricle with a finger. A similar technic—except for the small incision—serves to control an instrument which pierces the septum between the auricles.

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*Illumination in Operating Room. König.—p. 770. Idem. Gontermann. —p. 772.
*Explosion in Acetylene Anesthesia. F. Oehlecker.—p. 774.
The Marking of Diapositives. F. Oehlecker.—p. 779.
Surgery of Ileus. E. Cornils.—p. 782.
Surgery of Hydrocele. A. Gabay.—p. 785.
Raspatory for Thoracoplasty. A. Plenk and R. C. Matson.—p. 786.
Surgery of Ectopic Kidney. W. Braizew.—p. 787.
Extraction of Needles and Hooks in Tissues. O. Susani.—p. 791.

Illumination in Operating Room.—König prefers a grey paint for the walls of the operating room, and a greenish grey color for the sheets covering the patient.

Explosion in Acetylene Anesthesia.—Oehlecker discusses the danger of explosion in acetylene-oxygen anesthesia. It seems that the presence of particles of oil—instead of the acetylene—accounted for two such explosions. It is not sufficiently widely known that oxygen alone may cause grave explosions when it blows over oil. A whole oxygen tank may explode if oil is used to lubricate the valves. Every oxygen tank should be labeled "Beware of Approaching with Fat or Oil."

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*Syphilitic Injury of the Fetus. L. Nürnberger.—p. 705.
Transportation from Uterus into Tubes. R. Cordua.—p. 720.
*Mechanism of Transportation of the Ovum. Novak and Eisinger.—p. 724.
*Reticulo-Endothelial System in Pregnancy. R. Benda.—p. 727.
Blood Chemistry in Pregnancy. Iványi et al.—p. 731.
"Eclampsia and Calcium." P. Rissmann.—p. 742.
Fetal Asphyxia. E. Poeck.—p. 744.
Intraperitoneal Obstetric Uterine Hemorrhage. C. Kaufmann.—p. 752.
Models to Aid in Campaign Against Abortion. E. Martin.—p. 754.
Submucous Myoma in the Puerperium. H. Kamniker.—p. 757.
Dermoid Ovarian Cyst. J. Leibtschik.—p. 761.

Syphilitic Injury of the Fetus.—Nürnberger regards roentgenologic examination of the infant as an essential means of diagnosis. The syphilitic osteochondritis is evident in the new-born and may be the only sign of syphilis, just as may be the case with ossifying periostitis, which appears later. The specific treatment of the mother before the pregnancy did not modify much the prognosis for the children. In marked contrast to this, energetic arsphenamine treatment of the pregnant women resulted in 78-93 per cent of healthy children. It seems also that the mother may be cured by it permanently.

Mechanism of Transportation of the Ovum.—Novak and Eisinger applied a 10 per cent solution of phenol to one fallopian tube in rats. This treatment which inhibits the movements of the musculature, prevented pregnancy of that side.

Reticulo-Endothelial System in Pregnancy.—Benda believes that this system plays an important rôle in the removal of poisonous products during pregnancy. It suffers if there is an overproduction of toxic substances.

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Prevention of Genital Prolapse. M. Henkel.—p. 769.
Schuchard's Incision. A. Rieck.—p. 773.
Tuberculosis in Pregnancy. F. Schultze-Rhonhof.—p. 779.
Gymnastics and Gynecology. G. Kaboth.—p. 784.
*Infantilism and Matrimony. T. H. van de Velde.—p. 799.
Transitory Cyanosis of the New-Born. J. Novak.—p. 804.
Uterus Bicornis. C. H. Engelbrecht.—p. 805.
*Gonorrhea in Women. E. Maier.—p. 806.
Genital Tumors in Pregnancy. I. v. Büben.—p. 816.

Infantilism and Matrimony.—An abstract of Van de Velde's article was given on page 1592 when published elsewhere. He recommends examination of every young girl, who intends to marry, for infantilism of the sex organs. It is a cause of dysmenorrhea, dyspareunia, lack of sexual satisfaction, sterility, abortions and complications of labor. Moderate degrees of the condition yield to treatment. It might be advisable to notify the bridegroom and give him advice on how to behave, because of the probable frigidity, which, however, may improve later.

Gonorrhea in Women.—Maier had in Opitz' clinic further good results with Danin's litmus paper test. He treats gonorrhea in the female only by weak astringents (tannin in alcohol and glycerol).

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47: 257-288 (March 20) 1926

*Blood Platelets in Pernicious Anemia. E. Allard.—p. 258.

47: 289-312 (March 27) 1926

The Practitioner and Abdominal Surgery. M. Friedemann.—p. 289.

Blood Platelet Index in Pernicious Anemia.—Allard figures the index by dividing by 50 the number of platelets per thousand erythrocytes. For instance, with normal blood (250,000 platelets and 5,000,000 erythrocytes per cubic millimeter) there are 50 platelets per thousand erythrocytes. Thus, the index is 1. In pernicious anemia, the index is usually low (0.2 and less). A low index is an unfavorable sign. It announces an exacerbation even if the red count is comparatively high. A high index with low erythrocyte count frequently precedes a remission. No good remissions can be expected with less than 100,000 platelets per cubic millimeter.

Russkaia Klinika, Moscow

5: 3-182 (Jan.) 1926. Partial Index

*Tests of the Vegetative Nervous System. D. Pletneff.—p. 3.
Neurogenous Origin of Gastric Ulcer. I. Davydovsky.—p. 32.
Stability of Erythrocytes and Pathogenesis of Anemias. J. Tcherniak and M. Shevliagina.—p. 55.
*Roentgen-Ray Treatment of Uterine Myoma. A. Kaplan.—p. 93.
"Adenoma Sebaceum." I. Olesoff.—p. 107.

Comparative Studies of the Vegetative Nervous System.—Functional tests of the vegetative nervous system were applied by Pletneff in fifty-four subjects. He used atropine or epinephrine tests, besides determining the oculocardiac reflex, dermographism and other diagnostic symptoms. He concludes that there is no justification for classification of all persons in two groups, namely, the vagotonic and the sympathicotonic. Examination of different parts of the parasympathetic and sympathetic systems revealed functional dissociation of the two systems. All the drugs injected were substances foreign to the body; they cannot reveal the true functioning of the living cells of any of its organs. The reaction of the organism to the injected atropine or epinephrine depends not only on the nervous system, but also on the biologic autotonus of the cell, the latter connected with the predisposition or some external cause. Clinical reactions to atropine or epinephrine do not show the true condition of the parasympathetic or sympathetic system. These reactions may be considered merely the response of the organism as a whole to the drugs.

Roentgenotherapy of Benign Uterine Disease.—Kaplan reports forty-five cases of fibromyoma with metrorrhagias, treated by roentgen rays. All these patients have been under observation for about two years since the treatment. The rays were applied to both ovaries and to the sacrum; each field given from 6 to 12 Holzknecht units. The dose had been gradually decreased. Complete arrest of menstruation occurred in 97 per cent of the cases; the tumor disappeared in 40 per cent. The roentgen-ray treatment did not induce any by-effects; the general condition of the patients improved notably.

Ugeskrift for Læger, Copenhagen

88: 235-260 (March 11) 1926

Inaugural Lecture on Forensic Medicine. K. Sand.—p. 235.
*The Sedimentation Test. O. Bouet.—p. 240.
*The Pulse with Intracranial Disease. R. Lund.—p. 246.
Precautions Required in Extraction of Teeth Under General Anesthesia. A. Gollestrup.—p. 250.
*Male Death Rate and Alcohol in Copenhagen. K. A. Heiberg.—p. 251.

The Sedimentation Test.—Bouet has been studying the variations in the speed of sedimentation in 100 patients, including thirty-five with bone and muscle disease under parenteral protein therapy. The readings are more informative as to quantity than to quality. The variations throw light on the progress of the disease up or down, showing whether the objective findings parallel the subjective, and possibly dispelling the suspicion of malingering.

The Pulse with Intracranial Disease.—Slowing of the pulse was observed in from 28 to 65 per cent of Lund's 151 cases of otogenous sepsis, brain abscess, meningitis or encephalitis. It seems to be due to toxic irritation of the vagus. The mortality was 81 per cent among the sixty-five cases with bradycardia, while it was only 32 per cent in the eighty-six cases in which the pulse corresponded to the temperature. The highest degree of bradycardia was noted with an abscess in the brain. The unilateral localized pressure from an otogenous abscess in the brain is an important factor likewise in the bradycardia, but it is not the only factor.

Influence on the Male Death Rate of the Restrictions on the Consumption of Alcohol in Copenhagen.—Heiberg presents statistics to show that the death rate of men has always been constantly much higher than the death rate of women, but since 1917 this difference has been wiped out in the ages between 25 and 55. Instead of a difference of 36, 56 and 77 per cent higher mortality, the difference is only 16 or 11 per cent or zero. These decades are the ones most strongly inclined to alcoholism, and he thinks that these changes can be explained only as the effect of the restrictions imposed since 1917 on the consumption of alcohol. The female death rate has shown no change.